

ANALYTICAL REPORT

Job Number: 280-90232-1

Job Description: Ravenna, OH, LL5

For:

Cardno TEC, Inc
1658 Cole Boulevard
Suite 190
Golden, CO 80401

Attention: Ms. Heather Miner



Approved for release.
Stephanie K Rothmeyer
Project Manager I
12/9/2016 8:50 AM

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12/09/2016

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

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

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Definitions/Glossary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Qualifiers

GC/MS VOA

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

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Cardno TEC, Inc

Project: Ravenna, OH, LL5

Report Number: 280-90232-1

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

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

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

RECEIPT

The samples were received on 10/28/2016 at 9:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

Per client email add -GW to the end of all sample IDs received 24 - 29 October 2016.

Analysis for PCBs for the following sample was put on hold by the client: LL5mw-002-102616-GW (280-90232-1), LL5mw-006-102616-GW (280-90232-2). This analysis was originally requested on the chain-of-custody (COC). On 12/8/16 the client informed the laboratory that the samples had been recollected and to cancel the analysis on hold.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples LL5mw-002-102616-GW (280-90232-1), LL5mw-006-102616-GW (280-90232-2) and TRIP BLANK (280-90232-3) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 11/09/2016 and 11/10/2016.

Methylene Chloride was detected in method blank MB 280-350526/6 at a level that was above the method detection limit but below one half the reporting limit. The value should be considered an estimate, and has been flagged.

4-Bromofluorobenzene (Surr) and Toluene-d8 (Surr) failed the surrogate recovery criteria high for LL5mw-006-102616-GW (280-90232-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed. Associated results are flagged "Q".

The following compound was outside control limits in the continuing calibration verification (CCV) associated with batch 350742: Chloromethane. This compound is not classified as a Calibration Check Compound (CCC) in the reference method. There is insufficient holding time remaining for re-analysis; therefore, the data have been reported. Associated results are flagged "Q".

Internal standard responses were outside of acceptance limits for the following CCVC: (CCVC 280-350742/37). A sample in this batch had very bad matrix which elevated the internal standard responses for the rest of the batch. All other criteria passed for this CCVC, and the batch could not be re-analyzed due to all of the samples had expired.

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

CYANIDE, TOTAL AND/OR AMENABLE

Samples LL5mw-002-102616-GW (280-90232-1) and LL5mw-006-102616-GW (280-90232-2) were analyzed for Cyanide, Total and/or Amenable in accordance with 9012B. The samples were prepared and analyzed on 11/08/2016 and 11/09/2016.

Cyanide, Total was detected in method blank MB 280-350408/4-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

Detection Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Client Sample ID: LL5mw-002-102616-GW

Lab Sample ID: 280-90232-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.93	J	5.0	0.32	ug/L	1		8260B	Total/NA
Cyanide, Total	2.0	J	10	2.0	ug/L	1		9012B	Total/NA

Client Sample ID: LL5mw-006-102616-GW

Lab Sample ID: 280-90232-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.79	J	5.0	0.32	ug/L	1		8260B	Total/NA
Cyanide, Total	2.8	J	10	2.0	ug/L	1		9012B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-90232-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	1.2	J	5.0	0.32	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Client Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Client Sample ID: LL5mw-002-102616-GW

Lab Sample ID: 280-90232-1

Date Collected: 10/26/16 10:35

Matrix: Water

Date Received: 10/28/16 09:55

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L	—		11/09/16 14:43	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			11/09/16 14:43	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			11/09/16 14:43	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			11/09/16 14:43	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			11/09/16 14:43	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/09/16 14:43	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/09/16 14:43	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			11/09/16 14:43	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			11/09/16 14:43	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			11/09/16 14:43	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			11/09/16 14:43	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			11/09/16 14:43	1
Acetone	6.4	U	10	1.9	ug/L			11/09/16 14:43	1
Benzene	0.40	U	1.0	0.16	ug/L			11/09/16 14:43	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/09/16 14:43	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/09/16 14:43	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/09/16 14:43	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/09/16 14:43	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/09/16 14:43	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/09/16 14:43	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/09/16 14:43	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/09/16 14:43	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/09/16 14:43	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/09/16 14:43	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/09/16 14:43	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/09/16 14:43	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/09/16 14:43	1
Methylene Chloride	0.93	J	5.0	0.32	ug/L			11/09/16 14:43	1
Styrene	0.40	U	1.0	0.17	ug/L			11/09/16 14:43	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/09/16 14:43	1
Toluene	0.40	U	1.0	0.17	ug/L			11/09/16 14:43	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/09/16 14:43	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/09/16 14:43	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/09/16 14:43	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			11/09/16 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 118		11/09/16 14:43	1
4-Bromofluorobenzene (Surr)	96		85 - 114		11/09/16 14:43	1
Dibromofluoromethane (Surr)	110		80 - 119		11/09/16 14:43	1
Toluene-d8 (Surr)	93		89 - 112		11/09/16 14:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.0	J	10	2.0	ug/L	—	11/08/16 09:41	11/08/16 13:28	1

Client Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Client Sample ID: LL5mw-006-102616-GW

Lab Sample ID: 280-90232-2

Date Collected: 10/27/16 15:11

Matrix: Water

Date Received: 10/28/16 09:55

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/10/16 14:43	1
1,1,2,2-Tetrachloroethane	0.80	U Q	1.0	0.20	ug/L			11/10/16 14:43	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			11/10/16 14:43	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			11/10/16 14:43	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			11/10/16 14:43	1
1,2-Dibromoethane	0.40	U Q	1.0	0.18	ug/L			11/10/16 14:43	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/10/16 14:43	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			11/10/16 14:43	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			11/10/16 14:43	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			11/10/16 14:43	1
2-Hexanone	4.0	U Q	5.0	1.4	ug/L			11/10/16 14:43	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			11/10/16 14:43	1
Acetone	6.4	U	10	1.9	ug/L			11/10/16 14:43	1
Benzene	0.40	U	1.0	0.16	ug/L			11/10/16 14:43	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/10/16 14:43	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/10/16 14:43	1
Bromoform	0.40	U Q	1.0	0.19	ug/L			11/10/16 14:43	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/10/16 14:43	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/10/16 14:43	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/10/16 14:43	1
Chlorobenzene	0.40	U Q	1.0	0.17	ug/L			11/10/16 14:43	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/10/16 14:43	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/10/16 14:43	1
Chloromethane	0.80	U Q	2.0	0.30	ug/L			11/10/16 14:43	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/10/16 14:43	1
Dibromochloromethane	0.40	U Q	1.0	0.17	ug/L			11/10/16 14:43	1
Ethylbenzene	0.40	U Q	1.0	0.16	ug/L			11/10/16 14:43	1
Methylene Chloride	0.79	J	5.0	0.32	ug/L			11/10/16 14:43	1
Styrene	0.40	U Q	1.0	0.17	ug/L			11/10/16 14:43	1
Tetrachloroethene	0.40	U Q	1.0	0.20	ug/L			11/10/16 14:43	1
Toluene	0.40	U	1.0	0.17	ug/L			11/10/16 14:43	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/10/16 14:43	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/10/16 14:43	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/10/16 14:43	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			11/10/16 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		81 - 118		11/10/16 14:43	1
4-Bromofluorobenzene (Surr)	117	Q	85 - 114		11/10/16 14:43	1
Dibromofluoromethane (Surr)	112		80 - 119		11/10/16 14:43	1
Toluene-d8 (Surr)	119	Q	89 - 112		11/10/16 14:43	1

General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.8	J	10	2.0	ug/L		11/09/16 06:37	11/09/16 12:42	1

Client Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-90232-3

Date Collected: 10/27/16 00:00

Matrix: Water

Date Received: 10/28/16 09:55

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/09/16 15:31	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			11/09/16 15:31	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			11/09/16 15:31	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			11/09/16 15:31	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			11/09/16 15:31	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/09/16 15:31	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/09/16 15:31	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			11/09/16 15:31	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			11/09/16 15:31	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			11/09/16 15:31	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			11/09/16 15:31	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			11/09/16 15:31	1
Acetone	6.4	U	10	1.9	ug/L			11/09/16 15:31	1
Benzene	0.40	U	1.0	0.16	ug/L			11/09/16 15:31	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/09/16 15:31	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/09/16 15:31	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/09/16 15:31	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/09/16 15:31	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/09/16 15:31	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/09/16 15:31	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/09/16 15:31	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/09/16 15:31	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/09/16 15:31	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/09/16 15:31	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/09/16 15:31	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/09/16 15:31	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/09/16 15:31	1
Methylene Chloride	1.2	J	5.0	0.32	ug/L			11/09/16 15:31	1
Styrene	0.40	U	1.0	0.17	ug/L			11/09/16 15:31	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/09/16 15:31	1
Toluene	0.40	U	1.0	0.17	ug/L			11/09/16 15:31	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/09/16 15:31	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/09/16 15:31	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/09/16 15:31	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			11/09/16 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		81 - 118		11/09/16 15:31	1
4-Bromofluorobenzene (Surr)	95		85 - 114		11/09/16 15:31	1
Dibromofluoromethane (Surr)	110		80 - 119		11/09/16 15:31	1
Toluene-d8 (Surr)	94		89 - 112		11/09/16 15:31	1

Default Detection Limits

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

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

Analyte	LOQ	DL	Units	Method
1,1,1-Trichloroethane	1.0	0.16	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.20	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.32	ug/L	8260B
1,1-Dichloroethane	1.0	0.16	ug/L	8260B
1,1-Dichloroethene	1.0	0.14	ug/L	8260B
1,2-Dibromoethane	1.0	0.18	ug/L	8260B
1,2-Dichloroethane	1.0	0.13	ug/L	8260B
1,2-Dichloroethene, Total	1.0	0.15	ug/L	8260B
1,2-Dichloropropane	1.0	0.13	ug/L	8260B
2-Butanone (MEK)	6.0	1.8	ug/L	8260B
2-Hexanone	5.0	1.4	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	5.0	1.0	ug/L	8260B
Acetone	10	1.9	ug/L	8260B
Benzene	1.0	0.16	ug/L	8260B
Bromochloromethane	1.0	0.10	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.19	ug/L	8260B
Bromomethane	2.0	0.21	ug/L	8260B
Carbon disulfide	2.0	0.45	ug/L	8260B
Carbon tetrachloride	2.0	0.19	ug/L	8260B
Chlorobenzene	1.0	0.17	ug/L	8260B
Chloroethane	2.0	0.41	ug/L	8260B
Chloroform	1.0	0.16	ug/L	8260B
Chloromethane	2.0	0.30	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Dibromochloromethane	1.0	0.17	ug/L	8260B
Ethylbenzene	1.0	0.16	ug/L	8260B
Methylene Chloride	5.0	0.32	ug/L	8260B
Styrene	1.0	0.17	ug/L	8260B
Tetrachloroethene	1.0	0.20	ug/L	8260B
Toluene	1.0	0.17	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.19	ug/L	8260B
Trichloroethene	1.0	0.16	ug/L	8260B
Vinyl chloride	1.5	0.10	ug/L	8260B
Xylenes, Total	2.0	0.19	ug/L	8260B

General Chemistry

Prep: 9012B

Analyte	LOQ	DL	Units	Method
Cyanide, Total	10	2.0	ug/L	9012B

Surrogate Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (81-118)	BFB (85-114)	DBFM (80-119)	TOL (89-112)
280-90232-1	LL5mw-002-102616-GW	98	96	110	93
280-90232-2	LL5mw-006-102616-GW	106	117 Q	112	119 Q
280-90232-3	TRIP BLANK	96	95	110	94
LCS 280-350526/4	Lab Control Sample	100	91	105	94
LCS 280-350742/4	Lab Control Sample	90	85	88	98
MB 280-350526/6	Method Blank	99	97	111	93
MB 280-350742/6	Method Blank	102	97	100	109

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

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

Lab Sample ID: MB 280-350526/6

Matrix: Water

Analysis Batch: 350526

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/09/16 08:40	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			11/09/16 08:40	1
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			11/09/16 08:40	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			11/09/16 08:40	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			11/09/16 08:40	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/09/16 08:40	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/09/16 08:40	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			11/09/16 08:40	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			11/09/16 08:40	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			11/09/16 08:40	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			11/09/16 08:40	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			11/09/16 08:40	1
Acetone	6.4	U	10	1.9	ug/L			11/09/16 08:40	1
Benzene	0.40	U	1.0	0.16	ug/L			11/09/16 08:40	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/09/16 08:40	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/09/16 08:40	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/09/16 08:40	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/09/16 08:40	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/09/16 08:40	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/09/16 08:40	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/09/16 08:40	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/09/16 08:40	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/09/16 08:40	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/09/16 08:40	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/09/16 08:40	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/09/16 08:40	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/09/16 08:40	1
Methylene Chloride	1.84	J	5.0	0.32	ug/L			11/09/16 08:40	1
Styrene	0.40	U	1.0	0.17	ug/L			11/09/16 08:40	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/09/16 08:40	1
Toluene	0.40	U	1.0	0.17	ug/L			11/09/16 08:40	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/09/16 08:40	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/09/16 08:40	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/09/16 08:40	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			11/09/16 08:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		11/09/16 08:40	1
4-Bromofluorobenzene (Surr)	97		85 - 114		11/09/16 08:40	1
Dibromofluoromethane (Surr)	111		80 - 119		11/09/16 08:40	1
Toluene-d8 (Surr)	93		89 - 112		11/09/16 08:40	1

Lab Sample ID: LCS 280-350526/4

Matrix: Water

Analysis Batch: 350526

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	5.28		ug/L		106	74 - 131

TestAmerica Denver

QC Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

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

Lab Sample ID: LCS 280-350526/4

Matrix: Water

Analysis Batch: 350526

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	5.00	3.91		ug/L		78	71 - 121
1,1,2-Trichloroethane	5.00	4.94		ug/L		99	80 - 119
1,1-Dichloroethane	5.00	4.55		ug/L		91	77 - 125
1,1-Dichloroethene	5.00	5.03		ug/L		101	71 - 131
1,2-Dibromoethane	5.00	4.82		ug/L		96	77 - 121
1,2-Dichloroethane	5.00	5.13		ug/L		103	73 - 128
1,2-Dichloroethene, Total	10.0	10.3		ug/L		103	79 - 121
1,2-Dichloropropane	5.00	4.45		ug/L		89	78 - 122
2-Butanone (MEK)	20.0	17.6		ug/L		88	56 - 143
2-Hexanone	20.0	18.0		ug/L		90	57 - 139
4-Methyl-2-pentanone (MIBK)	20.0	20.8		ug/L		104	67 - 130
Acetone	20.0	18.7		ug/L		93	39 - 160
Benzene	5.00	4.95		ug/L		99	79 - 120
Bromochloromethane	5.00	5.39		ug/L		108	78 - 123
Bromodichloromethane	5.00	4.84		ug/L		97	79 - 125
Bromoform	5.00	5.14		ug/L		103	66 - 130
Bromomethane	5.00	6.09		ug/L		122	53 - 141
Carbon disulfide	5.00	5.00		ug/L		100	64 - 133
Carbon tetrachloride	5.00	5.58		ug/L		112	72 - 136
Chlorobenzene	5.00	4.86		ug/L		97	82 - 118
Chloroethane	5.00	5.13		ug/L		103	60 - 138
Chloroform	5.00	4.96		ug/L		99	79 - 124
Chloromethane	5.00	5.15		ug/L		103	50 - 139
cis-1,3-Dichloropropene	5.00	4.55		ug/L		91	75 - 124
Dibromochloromethane	5.00	4.73		ug/L		95	74 - 126
Ethylbenzene	5.00	4.84		ug/L		97	79 - 121
Methylene Chloride	5.00	5.79		ug/L		116	74 - 124
Styrene	5.00	4.79		ug/L		96	78 - 123
Tetrachloroethene	5.00	5.43		ug/L		109	74 - 129
Toluene	5.00	5.14		ug/L		103	80 - 121
trans-1,3-Dichloropropene	5.00	5.03		ug/L		101	73 - 127
Trichloroethene	5.00	5.01		ug/L		100	79 - 123
Vinyl chloride	5.00	5.71		ug/L		114	58 - 137
Xylenes, Total	10.0	9.77		ug/L		98	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		81 - 118
4-Bromofluorobenzene (Surr)	91		85 - 114
Dibromofluoromethane (Surr)	105		80 - 119
Toluene-d8 (Surr)	94		89 - 112

Lab Sample ID: MB 280-350742/6

Matrix: Water

Analysis Batch: 350742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.16	ug/L			11/10/16 09:29	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.20	ug/L			11/10/16 09:29	1

TestAmerica Denver

QC Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

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

Lab Sample ID: MB 280-350742/6

Matrix: Water

Analysis Batch: 350742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.80	U	1.0	0.32	ug/L			11/10/16 09:29	1
1,1-Dichloroethane	0.80	U	1.0	0.16	ug/L			11/10/16 09:29	1
1,1-Dichloroethene	0.80	U	1.0	0.14	ug/L			11/10/16 09:29	1
1,2-Dibromoethane	0.40	U	1.0	0.18	ug/L			11/10/16 09:29	1
1,2-Dichloroethane	0.40	U	1.0	0.13	ug/L			11/10/16 09:29	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.15	ug/L			11/10/16 09:29	1
1,2-Dichloropropane	0.40	U	1.0	0.13	ug/L			11/10/16 09:29	1
2-Butanone (MEK)	4.0	U	6.0	1.8	ug/L			11/10/16 09:29	1
2-Hexanone	4.0	U	5.0	1.4	ug/L			11/10/16 09:29	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	1.0	ug/L			11/10/16 09:29	1
Acetone	6.4	U	10	1.9	ug/L			11/10/16 09:29	1
Benzene	0.40	U	1.0	0.16	ug/L			11/10/16 09:29	1
Bromochloromethane	0.20	U	1.0	0.10	ug/L			11/10/16 09:29	1
Bromodichloromethane	0.40	U	1.0	0.17	ug/L			11/10/16 09:29	1
Bromoform	0.40	U	1.0	0.19	ug/L			11/10/16 09:29	1
Bromomethane	0.80	U	2.0	0.21	ug/L			11/10/16 09:29	1
Carbon disulfide	1.6	U	2.0	0.45	ug/L			11/10/16 09:29	1
Carbon tetrachloride	0.40	U	2.0	0.19	ug/L			11/10/16 09:29	1
Chlorobenzene	0.40	U	1.0	0.17	ug/L			11/10/16 09:29	1
Chloroethane	1.6	U	2.0	0.41	ug/L			11/10/16 09:29	1
Chloroform	0.40	U	1.0	0.16	ug/L			11/10/16 09:29	1
Chloromethane	0.80	U	2.0	0.30	ug/L			11/10/16 09:29	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.16	ug/L			11/10/16 09:29	1
Dibromochloromethane	0.40	U	1.0	0.17	ug/L			11/10/16 09:29	1
Ethylbenzene	0.40	U	1.0	0.16	ug/L			11/10/16 09:29	1
Methylene Chloride	0.80	U	5.0	0.32	ug/L			11/10/16 09:29	1
Styrene	0.40	U	1.0	0.17	ug/L			11/10/16 09:29	1
Tetrachloroethene	0.40	U	1.0	0.20	ug/L			11/10/16 09:29	1
Toluene	0.40	U	1.0	0.17	ug/L			11/10/16 09:29	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.19	ug/L			11/10/16 09:29	1
Trichloroethene	0.40	U	1.0	0.16	ug/L			11/10/16 09:29	1
Vinyl chloride	0.20	U	1.5	0.10	ug/L			11/10/16 09:29	1
Xylenes, Total	0.80	U	2.0	0.19	ug/L			11/10/16 09:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 118		11/10/16 09:29	1
4-Bromofluorobenzene (Surr)	97		85 - 114		11/10/16 09:29	1
Dibromofluoromethane (Surr)	100		80 - 119		11/10/16 09:29	1
Toluene-d8 (Surr)	109		89 - 112		11/10/16 09:29	1

Lab Sample ID: LCS 280-350742/4

Matrix: Water

Analysis Batch: 350742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	5.14		ug/L		103	74 - 131
1,1,2,2-Tetrachloroethane	5.00	4.92		ug/L		98	71 - 121
1,1,2-Trichloroethane	5.00	5.62		ug/L		112	80 - 119

TestAmerica Denver

QC Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

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

Lab Sample ID: LCS 280-350742/4

Matrix: Water

Analysis Batch: 350742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	5.00	5.23		ug/L		105	77 - 125
1,1-Dichloroethene	5.00	5.58		ug/L		112	71 - 131
1,2-Dibromoethane	5.00	5.23		ug/L		105	77 - 121
1,2-Dichloroethane	5.00	5.03		ug/L		101	73 - 128
1,2-Dichloroethene, Total	10.0	11.0		ug/L		110	79 - 121
1,2-Dichloropropane	5.00	5.50		ug/L		110	78 - 122
2-Butanone (MEK)	20.0	18.5		ug/L		92	56 - 143
2-Hexanone	20.0	16.0		ug/L		80	57 - 139
4-Methyl-2-pentanone (MIBK)	20.0	17.8		ug/L		89	67 - 130
Acetone	20.0	18.4		ug/L		92	39 - 160
Benzene	5.00	5.49		ug/L		110	79 - 120
Bromochloromethane	5.00	5.73		ug/L		115	78 - 123
Bromodichloromethane	5.00	5.26		ug/L		105	79 - 125
Bromoform	5.00	5.16		ug/L		103	66 - 130
Bromomethane	5.00	5.57		ug/L		111	53 - 141
Carbon disulfide	5.00	5.82		ug/L		116	64 - 133
Carbon tetrachloride	5.00	5.42		ug/L		108	72 - 136
Chlorobenzene	5.00	5.24		ug/L		105	82 - 118
Chloroethane	5.00	4.64		ug/L		93	60 - 138
Chloroform	5.00	5.25		ug/L		105	79 - 124
Chloromethane	5.00	4.17		ug/L		83	50 - 139
cis-1,3-Dichloropropene	5.00	4.34		ug/L		87	75 - 124
Dibromochloromethane	5.00	4.62		ug/L		92	74 - 126
Ethylbenzene	5.00	5.40		ug/L		108	79 - 121
Methylene Chloride	5.00	6.20		ug/L		124	74 - 124
Styrene	5.00	5.22		ug/L		104	78 - 123
Tetrachloroethene	5.00	5.27		ug/L		105	74 - 129
Toluene	5.00	5.71		ug/L		114	80 - 121
trans-1,3-Dichloropropene	5.00	5.11		ug/L		102	73 - 127
Trichloroethene	5.00	5.02		ug/L		100	79 - 123
Vinyl chloride	5.00	4.82		ug/L		96	58 - 137
Xylenes, Total	10.0	10.8		ug/L		108	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		81 - 118
4-Bromofluorobenzene (Surr)	85		85 - 114
Dibromofluoromethane (Surr)	88		80 - 119
Toluene-d8 (Surr)	98		89 - 112

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

Lab Sample ID: MB 280-350408/4-A

Matrix: Water

Analysis Batch: 350450

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 350408

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.09	J	10	2.0	ug/L		11/08/16 09:41	11/08/16 13:01	1

TestAmerica Denver

QC Sample Results

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

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

Lab Sample ID: HLCS 280-350408/1-A
Matrix: Water
Analysis Batch: 350450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350408
%Rec.

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	400	401		ug/L		100	90 - 110

Lab Sample ID: LCS 280-350408/3-A
Matrix: Water
Analysis Batch: 350450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350408
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	100	97.8		ug/L		98	83 - 116

Lab Sample ID: LLCS 280-350408/2-A
Matrix: Water
Analysis Batch: 350450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350408
%Rec.

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	100	103		ug/L		103	44 - 167

Lab Sample ID: MB 280-350530/4-A
Matrix: Water
Analysis Batch: 350638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 350530

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	5.0	U	10	2.0	ug/L		11/09/16 06:37	11/09/16 12:20	1

Lab Sample ID: HLCS 280-350530/1-A
Matrix: Water
Analysis Batch: 350638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350530
%Rec.

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	400	383		ug/L		96	90 - 110

Lab Sample ID: LCS 280-350530/3-A
Matrix: Water
Analysis Batch: 350638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350530
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	100	96.8		ug/L		97	83 - 116

Lab Sample ID: LLCS 280-350530/2-A
Matrix: Water
Analysis Batch: 350638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 350530
%Rec.

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	100	98.0		ug/L		98	44 - 167

TestAmerica Denver

QC Association Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

GC/MS VOA

Analysis Batch: 350526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-90232-1	LL5mw-002-102616-GW	Total/NA	Water	8260B	
280-90232-3	TRIP BLANK	Total/NA	Water	8260B	
MB 280-350526/6	Method Blank	Total/NA	Water	8260B	
LCS 280-350526/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 350742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-90232-2	LL5mw-006-102616-GW	Total/NA	Water	8260B	
MB 280-350742/6	Method Blank	Total/NA	Water	8260B	
LCS 280-350742/4	Lab Control Sample	Total/NA	Water	8260B	

General Chemistry

Prep Batch: 350408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-90232-1	LL5mw-002-102616-GW	Total/NA	Water	9012B	
MB 280-350408/4-A	Method Blank	Total/NA	Water	9012B	
HLCS 280-350408/1-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 280-350408/3-A	Lab Control Sample	Total/NA	Water	9012B	
LLCS 280-350408/2-A	Lab Control Sample	Total/NA	Water	9012B	

Analysis Batch: 350450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-90232-1	LL5mw-002-102616-GW	Total/NA	Water	9012B	350408
MB 280-350408/4-A	Method Blank	Total/NA	Water	9012B	350408
HLCS 280-350408/1-A	Lab Control Sample	Total/NA	Water	9012B	350408
LCS 280-350408/3-A	Lab Control Sample	Total/NA	Water	9012B	350408
LLCS 280-350408/2-A	Lab Control Sample	Total/NA	Water	9012B	350408

Prep Batch: 350530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-90232-2	LL5mw-006-102616-GW	Total/NA	Water	9012B	
MB 280-350530/4-A	Method Blank	Total/NA	Water	9012B	
HLCS 280-350530/1-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 280-350530/3-A	Lab Control Sample	Total/NA	Water	9012B	
LLCS 280-350530/2-A	Lab Control Sample	Total/NA	Water	9012B	

Analysis Batch: 350638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-90232-2	LL5mw-006-102616-GW	Total/NA	Water	9012B	350530
MB 280-350530/4-A	Method Blank	Total/NA	Water	9012B	350530
HLCS 280-350530/1-A	Lab Control Sample	Total/NA	Water	9012B	350530
LCS 280-350530/3-A	Lab Control Sample	Total/NA	Water	9012B	350530
LLCS 280-350530/2-A	Lab Control Sample	Total/NA	Water	9012B	350530

Lab Chronicle

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Client Sample ID: LL5mw-002-102616-GW

Date Collected: 10/26/16 10:35

Date Received: 10/28/16 09:55

Lab Sample ID: 280-90232-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	350526	11/09/16 14:43	MRM	TAL DEN
Total/NA	Prep	9012B			50 mL	50 mL	350408	11/08/16 09:41	JML	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	350450	11/08/16 13:28	JML	TAL DEN

Client Sample ID: LL5mw-006-102616-GW

Date Collected: 10/27/16 15:11

Date Received: 10/28/16 09:55

Lab Sample ID: 280-90232-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	350742	11/10/16 14:43	JLS	TAL DEN
Total/NA	Prep	9012B			50 mL	50 mL	350530	11/09/16 06:37	JML	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	350638	11/09/16 12:42	JML	TAL DEN

Client Sample ID: TRIP BLANK

Date Collected: 10/27/16 00:00

Date Received: 10/28/16 09:55

Lab Sample ID: 280-90232-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	350526	11/09/16 15:31	MRM	TAL DEN

Laboratory References:

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

Certification Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-17
Analysis Method	Prep Method	Matrix	Analyte	

Method Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
9012B	Cyanide, Total and/or Amenable	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: Cardno TEC, Inc
Project/Site: Ravenna, OH, LL5

TestAmerica Job ID: 280-90232-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-90232-1	LL5mw-002-102616-GW	Water	10/26/16 10:35	10/28/16 09:55
280-90232-2	LL5mw-006-102616-GW	Water	10/27/16 15:11	10/28/16 09:55
280-90232-3	TRIP BLANK	Water	10/27/16 00:00	10/28/16 09:55

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_H Analysis Batch Number: 345574Lab Sample ID: ICIS 280-345574/27 Client Sample ID: _____Date Analyzed: 10/08/16 02:43 Lab File ID: H9970.D GC Column: DB-624 (75.53 ID: 0.53 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol	3.17	Poor chromatography	moanm	10/09/16 11:14

Lab Sample ID: IC 280-345574/28 Client Sample ID: _____Date Analyzed: 10/08/16 03:06 Lab File ID: H9971.D GC Column: DB-624 (75.53 ID: 0.53 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethanol	3.16	Poor chromatography	moanm	10/09/16 11:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_P Analysis Batch Number: 341836Lab Sample ID: STD020 280-341836/22 IC Client Sample ID: _____Date Analyzed: 09/13/16 12:35 Lab File ID: P1847.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
n-Butanol	7.68	Wrong peak	seifertj	09/14/16 09:47

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_P Analysis Batch Number: 347337Lab Sample ID: STD003 280-347337/10 IC Client Sample ID: _____Date Analyzed: 10/20/16 09:54 Lab File ID: P2900.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	7.43	Unspecified		

Lab Sample ID: STD010 280-347337/11 IC Client Sample ID: _____Date Analyzed: 10/20/16 10:14 Lab File ID: P2901.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl ether	5.09	Unspecified		

Lab Sample ID: STD020 280-347337/12 IC Client Sample ID: _____Date Analyzed: 10/20/16 10:33 Lab File ID: P2902.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl ether	5.10	Unspecified		

Lab Sample ID: STD050 280-347337/13 IC Client Sample ID: _____Date Analyzed: 10/20/16 10:53 Lab File ID: P2903.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl ether	5.10	Unspecified		

Lab Sample ID: ICIS 280-347337/14 Client Sample ID: _____Date Analyzed: 10/20/16 11:12 Lab File ID: P2904.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl ether	5.10	Unspecified		

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_P Analysis Batch Number: 347337Lab Sample ID: STD30 280-347337/15 IC Client Sample ID: _____Date Analyzed: 10/20/16 11:32 Lab File ID: P2905.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl ether	5.09	Unspecified		

Lab Sample ID: STD60 280-347337/16 IC Client Sample ID: _____Date Analyzed: 10/20/16 11:51 Lab File ID: P2906.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl ether	5.10	Unspecified		

Lab Sample ID: ICV 280-347337/17 Client Sample ID: _____Date Analyzed: 10/20/16 12:30 Lab File ID: P2908.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl ether	5.10	Unspecified		

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_P Analysis Batch Number: 350742Lab Sample ID: CCV 280-350742/2 Client Sample ID: _____Date Analyzed: 11/10/16 08:09 Lab File ID: P3844.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.16	Wrong peak	seifertj	11/10/16 09:38

Lab Sample ID: CCVC 280-350742/37 Client Sample ID: _____Date Analyzed: 11/10/16 17:40 Lab File ID: P3873.D GC Column: DB-624 (60.25 ID: 0.25 (mm))

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	7.15	Split Peak	seifertj	11/11/16 08:49

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
CN 10ppm_00227	11/08/16	11/01/16	2% NaOH, Lot 1% NaOH_00078	100 mg/L	CN CAL Std_00052	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN CAL Std_00052	03/31/17		Ricca, Lot 2609C92		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN 10ppm_00228	11/16/16	11/09/16	2% NaOH, Lot 1% NaOH_00078	100 mg/L	CN CAL Std_00052	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN CAL Std_00052	03/31/17		Ricca, Lot 2609C92		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN CAL 1 ppm_01174	11/08/16	11/08/16	1% NaOH, Lot N/A	100 mL	CN 10ppm_00227	10 mL	Cyanide, Total	1 mg/L
.CN 10ppm_00227	11/08/16	11/01/16	2% NaOH, Lot 1% NaOH_00078	100 mg/L	CN CAL Std_00052	1 mL	Cyanide, Total	10 mg/L
..CN CAL Std_00052	03/31/17		Ricca, Lot 2609C92		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN CAL 1 ppm_01175	11/10/16	11/09/16	1% NaOH, Lot N/A	100 mL	CN 10ppm_00228	10 mL	Cyanide, Total	1 mg/L
.CN 10ppm_00228	11/16/16	11/09/16	2% NaOH, Lot 1% NaOH_00078	100 mg/L	CN CAL Std_00052	1 mL	Cyanide, Total	10 mg/L
..CN CAL Std_00052	03/31/17		Ricca, Lot 2609C92		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Daily_00938	11/08/16	11/08/16	1% HNO3, Lot N/A	100 mL	CN ICV Int_00406	1 mL	Cyanide, Total	0.1 mg/L
.CN ICV Int_00406	11/08/16	11/01/16	1% NaOH, Lot 1% NaOH_00078	100 mL	CN ICV Std_00038	1 mL	Cyanide, Total	10 mg/L
..CN ICV Std_00038	04/16/18		CPI, Lot 1097445		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Daily_00939	11/10/16	11/09/16	1% HNO3, Lot N/A	100 mL	CN ICV Int_00407	1 mL	Cyanide, Total	0.1 mg/L
.CN ICV Int_00407	11/16/16	11/09/16	1% NaOH, Lot 1% NaOH_00078	100 mL	CN ICV Std_00038	1 mL	Cyanide, Total	10 mg/L
..CN ICV Std_00038	04/16/18		CPI, Lot 1097445		(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Int_00406	11/08/16	11/01/16	1% NaOH, Lot 1% NaOH_00078	100 mL	CN ICV Std_00038	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN ICV Std_00038	04/16/18		CPI, Lot 1097445		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN ICV Int_00407	11/16/16	11/09/16	1% NaOH, Lot 1% NaOH_00078	100 mL	CN ICV Std_00038	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN ICV Std_00038	04/16/18		CPI, Lot 1097445		(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
MV-2c1eve+AVA_00017	10/31/16	08/06/16	P&T Methanol, Lot 127999	20 mL	MV-568720_00010	405 uL	Acrolein	399.938 ug/mL
					MV-569723_00001	320 uL	2-Chloroethyl vinyl ether	40 ug/mL
					MV-569724.sec_00007	320 uL	Vinyl acetate	80 ug/mL
.MV-568720_00010	04/30/16		RESTEK, Lot A0115761		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569723_00001	04/30/18		RESTEK, Lot A0110788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724.sec_00007	10/31/16		RESTEK, Lot A0118759		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-2c1eve+AVA_00018	11/30/16	10/29/16	P&T Methanol, Lot 127999	20 mL	MV-568720_00012	405 uL	Acrolein	399.938 ug/mL
					MV-569723_00001	320 uL	2-Chloroethyl vinyl ether	40 ug/mL
					MV-569724_00006	320 uL	Vinyl acetate	80 ug/mL
.MV-568720_00012	11/30/16		RESTEK, Lot A0120440		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569723_00001	04/30/18		RESTEK, Lot A0110788		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724_00006	01/31/17		RESTEK, Lot A0120164		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
MV-567649-D_00001	02/28/18		RESTEK, Lot A093504		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-568718-D_00006	03/31/20		RESTEK, Lot A0110961		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00073	02/22/17	08/22/16	P&T Methanol, Lot 127999	50 mL	MV-567650_00024	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00024	12/31/20		Restek, Lot A0115812		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MV-ARCH SS A_00074	04/06/17	10/06/16	P&T Methanol, Lot 136118	250 mL	MV-567650_00024	25 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00024	12/31/20		Restek, Lot A0115812		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-Gas/Ket A_00052	03/27/17	09/27/16	P&T Methanol, Lot 127999	10 mL	MV-569721_00003	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722_00004	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Dichlorodifluoromethane	40 ug/mL
							Dichlorofluoromethane	40 ug/mL
							Trichlorofluoromethane	40 ug/mL
					MV-569727_00005	640 uL	Vinyl chloride	40 ug/mL
							Cyclohexanone	1600 ug/mL
					(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569721_00003	11/30/18		RESTEK, Lot A0115554				Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
.MV-569722_00004	04/30/19		RESTEK, Lot A0118719		(Purchased Reagent)		Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
							Cyclohexanone	25000 ug/mL
.MV-569727_00005	01/31/19		RESTEK, Lot A0116621		(Purchased Reagent)			
MV-Gas/Ket B_00030	03/27/17	09/27/16	P&T Methanol, Lot 127999	10 mL	MV-569721.sec_00002	128 uL	2-Butanone (MEK)	160 ug/mL
							2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	160 ug/mL
					MV-569722.sec_00002	160 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MV-569721.sec_00002	07/31/18		RESTEK, Lot A0112937		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00002	08/31/18		RESTEK, Lot A0113063		(Purchased Reagent)		Bromomethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
MV-Main A_00027	11/19/16	05/19/16	P&T Methanol, Lot 118655	25 mL	MV-569720_00001	400 uL	1,1,1,2-Tetrachloroethane	40 ug/mL
							1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,1-Dichloropropene	40 ug/mL
							1,2,3-Trichlorobenzene	40 ug/mL
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	40 ug/mL
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichlorobenzene	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							1,3,5-Trimethylbenzene	40 ug/mL
							1,3-Dichlorobenzene	40 ug/mL
							1,3-Dichloropropane	40 ug/mL
							1,4-Dichlorobenzene	40 ug/mL
							1,4-Dioxane	800 ug/mL
							2,2-Dichloropropane	40 ug/mL
							2-Chlorotoluene	40 ug/mL
							2-Methyl-2-propanol	400 ug/mL
							3-Chloro-1-propene	40 ug/mL
							4-Chlorotoluene	40 ug/mL
							4-Isopropyltoluene	40 ug/mL
							Acrylonitrile	400 ug/mL
							Benzene	40 ug/mL
							Bromobenzene	40 ug/mL
							Bromochloromethane	40 ug/mL
							Bromodichloromethane	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Cyclohexane	40 ug/mL
							Dibromochloromethane	40 ug/mL
							Dibromomethane	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl ether	40 ug/mL
							Ethyl methacrylate	40 ug/mL
							Ethylbenzene	40 ug/mL
							Hexachlorobutadiene	40 ug/mL
							Hexane	40 ug/mL
							Iodomethane	40 ug/mL
							Isobutyl alcohol	1000 ug/mL
							Isopropylbenzene	40 ug/mL
							m-Xylene & p-Xylene	40 ug/mL
							Methyl acetate	200 ug/mL
							Methyl tert-butyl ether	40 ug/mL
							Methylcyclohexane	40 ug/mL
							Methylene Chloride	40 ug/mL
							n-Butylbenzene	40 ug/mL
							N-Propylbenzene	40 ug/mL
							Naphthalene	40 ug/mL
							o-Xylene	40 ug/mL
							sec-Butylbenzene	40 ug/mL
							Styrene	40 ug/mL
							tert-Butylbenzene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Tetrahydrofuran	80 ug/mL
							Toluene	40 ug/mL
					trans-1,2-Dichloroethene	40 ug/mL		
					trans-1,3-Dichloropropene	40 ug/mL		
					trans-1,4-Dichloro-2-butene	40 ug/mL		
					Trichloroethene	40 ug/mL		
MV-CUS17739_00001	500 uL	1-Chlorohexane	20 ug/mL					
		2-Pentanone	80 ug/mL					
		sec-Butyl Alcohol	600 ug/mL					
.MV-569720_00001	01/31/17	RESTEK, Lot A0108166			(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluor oethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	12500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00001	07/31/17		RESTEK, Lot CM-3152		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ug/mL
MV-Main A_00027	11/19/16	05/19/16	P&T Methanol, Lot 118655	25 mL	MV-569720_00001	400 uL	1,2-Dichloroethene, Total	80 ug/mL
							Xylenes, Total	80 ug/mL
.MV-569720_00001	01/31/17		RESTEK, Lot A0108166		(Purchased Reagent)		1,2-Dichloroethene, Total	5000 ug/mL
							Xylenes, Total	5000 ug/mL
MV-Main B_00016	01/31/17	09/19/16	P&T Methanol, Lot 127999	20 mL	MV-569720.sec_00001	320 uL	1,1,1-Trichloroethane	40 ug/mL
							1,1,2,2-Tetrachloroethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	40 ug/mL
							1,1-Dichloroethene	40 ug/mL
							1,2-Dibromoethane	40 ug/mL
							1,2-Dichloroethane	40 ug/mL
							1,2-Dichloroethene, Total	40 ug/mL
							1,2-Dichloropropane	40 ug/mL
							Benzene	40 ug/mL
							Bromochloromethane	40 ug/mL
							Bromodichloromethane	40 ug/mL
							Bromoform	40 ug/mL
							Carbon disulfide	40 ug/mL
							Carbon tetrachloride	40 ug/mL
							Chlorobenzene	40 ug/mL
							Chloroform	40 ug/mL
							cis-1,3-Dichloropropene	40 ug/mL
							Dibromochloromethane	40 ug/mL
							Ethylbenzene	40 ug/mL
							Methylene Chloride	40 ug/mL
							Styrene	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Toluene	40 ug/mL
							trans-1,3-Dichloropropene	40 ug/mL
							Trichloroethene	40 ug/mL
							Xylenes, Total	80 ug/mL
.MV-569720.sec_00001	01/31/17		RESTEK, Lot A0108163		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
				10 mL			1,2-Dichloroethene, Total	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							Benzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-Supp A_00021	01/01/17	07/01/16	P&T Methanol, Lot 12799	10 mL	mv-569728_00001	160 uL	Acetonitrile	400 ug/mL
							Ethanol	1600 ug/mL
							Isopropyl ether	40 ug/mL
							Propionitrile	400 ug/mL
							Tert-amyl methyl ether	40 ug/mL
							Tert-butyl ethyl ether	40 ug/mL
					mv-570808_00001	160 uL	1,2,3-Trimethylbenzene	40 ug/mL
							2-Chloro-1,3-butadiene	40 ug/mL
							2-Nitropropane	80 ug/mL
							Isopropyl alcohol	400 ug/mL
							Methacrylonitrile	400 ug/mL
							n-Butanol	1000 ug/mL
					mv-570809_00001	160 uL	Ethyl acetate	80 ug/mL
							Methyl methacrylate	80 ug/mL
					mv-VO-TAOH-5_00001	800 uL	cis-1,4-Dichloro-2-butene	80 ug/mL
.mv-569728_00001	01/31/17		RESTEK, Lot A0108216			(Purchased Reagent)	Acetonitrile	25000 ug/mL
							Ethanol	100000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-570808_00001	06/30/17		Restek, Lot A0116135			(Purchased Reagent)	1,2,3-Trimethylbenzene	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.mv-570809_00001	06/30/17		Restek, Lot A0116080		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
.mv-VO-TAOH-5_00001	05/31/17		SPEX, Lot BW160504027		(Purchased Reagent)		cis-1,4-Dichloro-2-butene	1000 ug/mL

Reagent

CN CAL Std_00052

**RICCA CHEMICAL COMPANY®**

Arlington, TX 76012

Pocomoke City, MD 21851

Batesville, IN 47006

<http://www.riccachemical.com>

1-888-GO-RICCA

customerservice@riccachemical.com

Certificate of Analysis

Cyanide Standard, 1000 ppm CN⁻

Lot Number: 2609C92**Product Number:** 2543**Manufacture Date:** SEP 22, 2016**Expiration Date:** MAR 2017

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.

Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Cyanide	151-50-8	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN ⁻)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM (D 4374)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
2543-4	120 mL amber poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Katie Schnur

Quality Control Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

CN ICV Std_00038

**USA**

5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe

P.O. Box 2704 P: +31 20 638 05 97
1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment:**Catalog No:**

Z-G34-4400-IC9M

Lot No: Expiration Date:

1097445

16-Apr-2018

Matrix:

0.179% NaOH

Description:

ISO Guide 34 - Cyanide, 100 mL
1,000 mg/L in H₂O

Additional Information:**Date Received:** _____**Container:** 4 oz (125 mL) Narrow
Mouth, HDPE**Certified Values:**

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by inductively coupled plasma optical emission spectrometry (ICP-OES) using an internally developed method against an independent source which is directly traceable to the NIST SRM's listed below.

The uncertainty value is calculated for a 95% confidence interval with a *k* value of 2.

Element	Symbol	CAS No	SRM No	NIST Lot No	Source Lot No	Purity %	Concentration mg/L	Uncertainty ± mg/L
Cyanide	CN	151-50-8	N/A	N/A	363.24.3S	98	1000	3.5



USA

5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe

P.O. Box 2704 P: +31 20 638 05 97
1000 CS Amsterdam F: +31 20 420 28 36
The Netherlands

Certificate of Analysis

Rev 0

Comment:

Catalog No:

Z-G34-4400-IC9M

Lot No: Expiration Date:

1097445

16-Apr-2018

Matrix:

0.179% NaOH

Description:

ISO Guide 34 - Cyanide, 100 mL
1,000 mg/L in H₂O

Calculation of Uncertainty

The following equations are used to calculate the value of the expanded uncertainty:

$U = k u_c$ U = Expanded Uncertainty, k = the coverage factor at the 95% confidence level, $k=2$, u_c = the combined uncertainty

$u_c = \sqrt{\sum u_i^2}$ where u_i are the individual uncertainty components for raw material, transportation, homogeneity, and shelf life.

Expiration Information:

The Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. These tests include the effect of temperature and packaging on the product. This standard is guaranteed until the expiration date listed above.

Accreditation:

This standard was manufactured by an ISO 17025 Chemical Testing Lab (Certificate number 3031.01) and ISO Guide 34 Reference Material Producer (RMP) Certificate number 3031.02 accredited by The American Association of Laboratory Accreditation (A2LA). Manufacturer's Quality System audited and registered by NSF-ISR to ISO 9001:2008 (Certificate number IZ391-IS4).

Manufactured By:

Carrie Bibbins
Chemist

Manufacture Date: 10/13/2016

Certified By:

Christy Lane
Chemist

Certified Date: 10/13/2016

Released By:

Mark Filla
Chemist

Original Issue Date: 10/13/2016

Reagent

MV-567649-D_00001



110 Benner Circle
 Bellefonte, PA 16823-8812
 Tel: (800)356-1688
 Fax: (814)353-1309

www.restek.com



Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567649 **Lot No.:** A093504

Description : 8260 Internal Standard

8260 Internal Standard 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : February 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	tert-Butyl-d9-alcohol	5,000.0 µg/mL	+/-	29.0689	µg/mL	Gravimetric
	CAS # 25725-11-5		+/-	110.6323	µg/mL	Unstressed
	Purity 99%		+/-	111.0833	µg/mL	Stressed
2	Fluorobenzene	250.0 µg/mL	+/-	1.4535	µg/mL	Gravimetric
	CAS # 462-06-6		+/-	5.5316	µg/mL	Unstressed
	Purity 99%		+/-	5.5542	µg/mL	Stressed
3	1,4-Dioxane-d8	5,000.0 µg/mL	+/-	29.0689	µg/mL	Gravimetric
	CAS # 17647-74-4		+/-	110.6323	µg/mL	Unstressed
	Purity 99%		+/-	111.0833	µg/mL	Stressed
4	Chlorobenzene-d5	250.0 µg/mL	+/-	1.4535	µg/mL	Gravimetric
	CAS # 3114-55-4		+/-	5.5316	µg/mL	Unstressed
	Purity 99%		+/-	5.5542	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4	250.0 µg/mL	+/-	1.4535	µg/mL	Gravimetric
	CAS # 3855-82-1		+/-	5.5316	µg/mL	Unstressed
	Purity 99%		+/-	5.5542	µg/mL	Stressed
Solvent:	P&T Methanol					
	CAS # 67-56-1					
	Purity 99%					

Column:

105m x .53mm x 3.0um
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

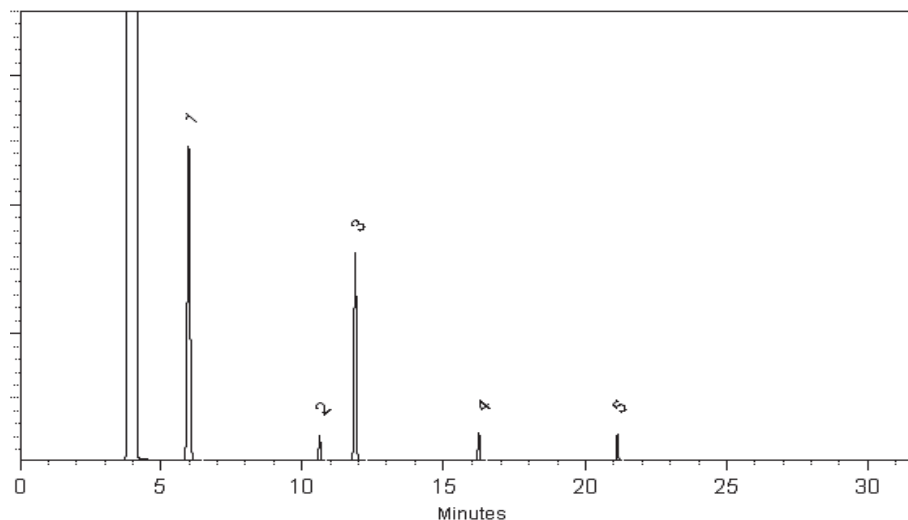
200°C

Det. Temp:

250°C

Det. Type:

FID



Diane Shaffer
Diane Shaffer - QA Analyst

Date Passed: 14-Feb-2013

Balance: B251644995

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date of the unopened ampul stored at the recommended storage condition is the last day of the month listed in the expiration date field.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31840, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-567650_00024



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0115812

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)					
1	Dibromofluoromethane		2,503.1	µg/mL	+/-	14.5534	µg/mL	Gravimetric		
	CAS #	1868-53-7				(Lot 022012)	+/-	140.3482	µg/mL	Unstressed
	Purity	99%				+/-	143.6322	µg/mL	Stressed	
2	1,2-Dichloroethane-d4		2,500.1	µg/mL	+/-	14.5360	µg/mL	Gravimetric		
	CAS #	17060-07-0				(Lot 14C-191)	+/-	140.1800	µg/mL	Unstressed
	Purity	99%				+/-	143.4600	µg/mL	Stressed	
3	Toluene-d8		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric		
	CAS #	2037-26-5				(Lot PR-26282)	+/-	140.4529	µg/mL	Unstressed
	Purity	99%				+/-	143.7393	µg/mL	Stressed	
4	1-Bromo-4-fluorobenzene (BFB)		2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric		
	CAS #	460-00-4				(Lot 20401KOV)	+/-	140.2361	µg/mL	Unstressed
	Purity	99%				+/-	143.5174	µg/mL	Stressed	
Solvent:	P&T Methanol									
	CAS #	67-56-1								
	Purity	99%								

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

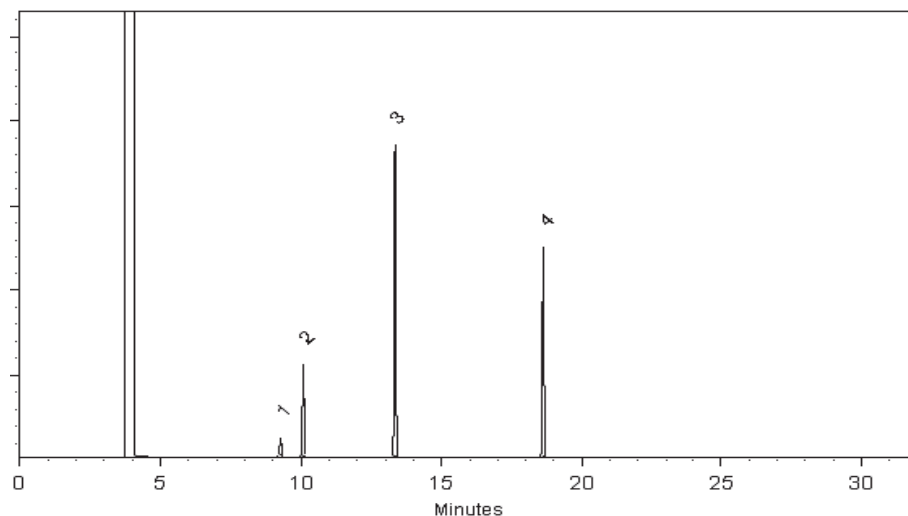
200°C

Det. Temp:

250°C

Det. Type:

FID

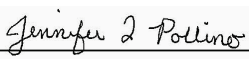


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Brandon Cook - Mix Technician

Date Mixed: 07-Dec-2015

Balance: 1127510105


Jennifer L. Pollino - QC Analyst

Date Passed: 10-Dec-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00006



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



20x 5mL
REC 6/19/15 Cm

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 Lot No.: A0110961
Description : 8260 Internal Standard 2014
8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul
Container Size : 5 ml Pkg Amt: > 5 mL
Expiration Date : May 31, 2020 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	tert-Butyl-d9-alcohol CAS # 25725-11-5 (Lot I201P13) Purity 99%	5,001.6 µg/mL	+/- 29.0797 µg/mL Gravimetric +/- 106.0709 µg/mL Unstressed +/- 106.5415 µg/mL Stressed
2	2-Butanone-d5 CAS # 24313-50-6 (Lot M276P20) Purity 99%	1,250.0 µg/mL	+/- 7.2844 µg/mL Gravimetric +/- 26.5138 µg/mL Unstressed +/- 26.6314 µg/mL Stressed
3	Fluorobenzene CAS # 462-06-6 (Lot 1380033) Purity 99%	250.4 µg/mL	+/- 1.4771 µg/mL Gravimetric +/- 5.3162 µg/mL Unstressed +/- 5.3397 µg/mL Stressed
4	1,4-Dioxane-d8 CAS # 17647-74-4 (Lot 1-19073) Purity 99%	5,000.4 µg/mL	+/- 29.0728 µg/mL Gravimetric +/- 106.0454 µg/mL Unstressed +/- 106.5159 µg/mL Stressed
5	Chlorobenzene-d5 CAS # 3114-55-4 (Lot PR-23926) Purity 99%	250.6 µg/mL	+/- 1.4783 µg/mL Gravimetric +/- 5.3205 µg/mL Unstressed +/- 5.3440 µg/mL Stressed
6	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 (Lot PR-18488) Purity 99%	250.6 µg/mL	+/- 1.4783 µg/mL Gravimetric +/- 5.3205 µg/mL Unstressed +/- 5.3440 µg/mL Stressed

Reagent

MV-568720_00010



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Rec 12/15/15
GM

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 Lot No.: A0115761
Description : 8260 List 1/Std #5 Acrolein High
8260 List 1/Std #5 Acrolein High 19,750 µg/mL, Water, 1 mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : April 30, 2016 Storage: 0°C or colder
Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Acrolein CAS # 107-02-8 (Lot 150923JLM) Purity 99%	19,806.0 µg/mL	+/- 115.9685 µg/mL Gravimetric +/- 635.0426 µg/mL Unstressed +/- 738.1676 µg/mL Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

MV-569720.sec_00001



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720.sec **Lot No.:** A0108163

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2017 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Diethyl ether (ethyl ether) CAS # 60-29-7.SEC (Lot F23X068) Purity 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL Gravimetric +/- 133.1044 µg/mL Unstressed +/- 133.2511 µg/mL Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1.SEC (Lot 18342) Purity 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL Gravimetric +/- 133.1044 µg/mL Unstressed +/- 133.2511 µg/mL Stressed
3	1,1-Dichloroethene CAS # 75-35-4.SEC (Lot 903000) Purity 99%	2,502.8 µg/mL	+/- 14.5512 µg/mL Gravimetric +/- 133.1908 µg/mL Unstressed +/- 133.3377 µg/mL Stressed
4	tert-Butanol (TBA) CAS # 75-65-0.SEC (Lot XYXDO) Purity 98%	25,000.5 µg/mL	+/- 145.3477 µg/mL Gravimetric +/- 1,330.4725 µg/mL Unstressed +/- 1,331.9397 µg/mL Stressed
5	Iodomethane (methyl iodide) CAS # 74-88-4.SEC (Lot A13Y016) Purity 97%	2,500.5 µg/mL	+/- 14.5383 µg/mL Gravimetric +/- 133.0732 µg/mL Unstressed +/- 133.2199 µg/mL Stressed
6	Methyl acetate CAS # 79-20-9.SEC (Lot YDGVD) Purity 99%	12,500.6 µg/mL	+/- 72.6759 µg/mL Gravimetric +/- 665.2553 µg/mL Unstressed +/- 665.9889 µg/mL Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1.SEC (Lot 5MNOA-DQ) Purity 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL Gravimetric +/- 133.1110 µg/mL Unstressed +/- 133.2578 µg/mL Stressed

8	Methylene chloride (dichloromethane) CAS # 75-09-2.SEC (Lot FGM02) Purity 99%	2,501.4	µg/mL	+/- +/- +/-	14.5432 133.1177 133.2645	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0.SEC (Lot MKBL1376V) Purity 98%	2,501.2	µg/mL	+/- +/- +/-	14.5422 133.1086 133.2554	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1.SEC (Lot CCFKL) Purity 99%	25,002.1	µg/mL	+/- +/- +/-	145.3569 1,330.5571 1,332.0244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	cis-1,2-Dichloroethene CAS # 156-59-2.SEC (Lot HGC01-BLKT) Purity 99%	2,500.3	µg/mL	+/- +/- +/-	14.5367 133.0578 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Hexane (C6) CAS # 110-54-3.SEC (Lot K24W001) Purity 98%	2,500.1	µg/mL	+/- +/- +/-	14.5358 133.0499 133.1967	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	1,1-Dichloroethane CAS # 75-34-3.SEC (Lot 2663100) Purity 99%	2,503.0	µg/mL	+/- +/- +/-	14.5527 133.2041 133.3510	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2-Dichloropropane CAS # 594-20-7.SEC (Lot GI01) Purity 99%	2,500.8	µg/mL	+/- +/- +/-	14.5396 133.0844 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	trans-1,2-Dichloroethene CAS # 156-60-5.SEC (Lot TS5UB) Purity 97%	2,500.2	µg/mL	+/- +/- +/-	14.5362 133.0538 133.2005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1.SEC (Lot PH2XK) Purity 99%	62,501.3	µg/mL	+/- +/- +/-	363.3687 3,326.1766 3,329.8447	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4.SEC (Lot ZAQTA-MS) Purity 99%	2,500.5	µg/mL	+/- +/- +/-	14.5381 133.0711 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Bromochloromethane CAS # 74-97-5.SEC (Lot 345600) Purity 99%	2,500.6	µg/mL	+/- +/- +/-	14.5388 133.0777 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Tetrahydrofuran CAS # 109-99-9.SEC (Lot XWFLA) Purity 99%	5,002.3	µg/mL	+/- +/- +/-	29.0835 266.2087 266.5023	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	1,1,1-Trichloroethane CAS # 71-55-6.SEC (Lot 1103200) Purity 99%	2,501.9	µg/mL	+/- +/- +/-	14.5461 133.1443 133.2911	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Cyclohexane CAS # 110-82-7.SEC (Lot YADRA) Purity 99%	2,501.5	µg/mL	+/- +/- +/-	14.5439 133.1243 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	1,1-Dichloropropene CAS # 563-58-6.SEC (Lot 2028500) Purity 97%	2,501.1	µg/mL	+/- +/- +/-	14.5419 133.1054 133.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	Carbon tetrachloride CAS # 56-23-5.SEC (Lot 11466) Purity 98%	2,501.9	µg/mL	+/- +/- +/-	14.5465 133.1477 133.2946	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	n-Heptane (C7) CAS # 142-82-5.SEC Purity 99%	(Lot OGM01)	2,500.4	µg/mL	+/- +/- +/-	14.5374 133.0644 133.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1,2-Dichloroethane CAS # 107-06-2.SEC Purity 99%	(Lot FO6PK)	2,501.9	µg/mL	+/- +/- +/-	14.5461 133.1443 133.2911	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Benzene CAS # 71-43-2.SEC Purity 99%	(Lot B28Y008)	2,500.9	µg/mL	+/- +/- +/-	14.5403 133.0911 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Trichloroethene CAS # 79-01-6.SEC Purity 98%	(Lot H04X050)	2,500.6	µg/mL	+/- +/- +/-	14.5387 133.0760 133.2228	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Methylcyclohexane CAS # 108-87-2.SEC Purity 99%	(Lot 24MSD-CD)	2,500.5	µg/mL	+/- +/- +/-	14.5381 133.0711 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	1,2-Dichloropropane CAS # 78-87-5.SEC Purity 99%	(Lot OGG01)	2,500.0	µg/mL	+/- +/- +/-	14.5352 133.0445 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Bromodichloromethane CAS # 75-27-4.SEC Purity 99%	(Lot 10171168)	2,501.5	µg/mL	+/- +/- +/-	14.5439 133.1243 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1.SEC Purity 99%	(Lot CHA4A)	50,000.8	µg/mL	+/- +/- +/-	290.6935 2,660.9280 2,663.8624	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3.SEC Purity 99%	(Lot FGI01-OICH)	2,500.6	µg/mL	+/- +/- +/-	14.5388 133.0777 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5.SEC Purity 99%	(Lot 7ZLXJ-TJ)	2,501.0	µg/mL	+/- +/- +/-	14.5410 133.0977 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3.SEC Purity 99%	(Lot YND2B-BD)	2,500.1	µg/mL	+/- +/- +/-	14.5359 133.0511 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2.SEC Purity 99%	(Lot MLWYK-LS)	2,500.8	µg/mL	+/- +/- +/-	14.5396 133.0844 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6.SEC Purity 98%	(Lot 2ECIC-NM)	2,501.6	µg/mL	+/- +/- +/-	14.5444 133.1282 133.2750	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5.SEC Purity 99%	(Lot 732700)	2,501.0	µg/mL	+/- +/- +/-	14.5410 133.0977 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9.SEC Purity 99%	(Lot AGN01-EFPC)	2,500.8	µg/mL	+/- +/- +/-	14.5396 133.0844 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4.SEC Purity 99%	(Lot F09W014)	2,500.0	µg/mL	+/- +/- +/-	14.5352 133.0445 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane CAS # 124-48-1.SEC Purity 97%	(Lot I13W021)	2,501.8	µg/mL	+/- +/- +/-	14.5454 133.1377 133.2845	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4.SEC Purity 98%	(Lot 1368400)	2,502.1	µg/mL	+/- +/- +/-	14.5472 133.1542 133.3011	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7.SEC Purity 99%	(Lot 1161936)	2,501.6	µg/mL	+/- +/- +/-	14.5447 133.1310 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,1,1,2-Tetrachloroethane CAS # 630-20-6.SEC Purity 99%	(Lot GC01-QSHR)	2,500.8	µg/mL	+/- +/- +/-	14.5396 133.0844 133.2312	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	Ethylbenzene CAS # 100-41-4.SEC Purity 99%	(Lot PI4SE-GR)	2,500.3	µg/mL	+/- +/- +/-	14.5367 133.0578 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	m-Xylene CAS # 108-38-3.SEC Purity 99%	(Lot OUKMG-GB)	1,250.4	µg/mL	+/- +/- +/-	7.2698 66.5422 66.6156	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	o-Xylene CAS # 95-47-6.SEC Purity 99%	(Lot FGL01-KTPK)	2,501.3	µg/mL	+/- +/- +/-	14.5425 133.1110 133.2578	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	p-Xylene CAS # 106-42-3.SEC Purity 99%	(Lot GM01)	1,251.6	µg/mL	+/- +/- +/-	7.2771 66.6087 66.6822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5.SEC Purity 99%	(Lot OFIOL-IA)	2,500.9	µg/mL	+/- +/- +/-	14.5403 133.0911 133.2378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8.SEC Purity 99%	(Lot 2PHXG-IH)	2,501.3	µg/mL	+/- +/- +/-	14.5425 133.1110 133.2578	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	Bromoform CAS # 75-25-2.SEC Purity 99%	(Lot 1039300)	2,501.5	µg/mL	+/- +/- +/-	14.5439 133.1243 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,1,2,2-Tetrachloroethane CAS # 79-34-5.SEC Purity 99%	(Lot CFA4D-AQ)	2,502.9	µg/mL	+/- +/- +/-	14.5519 133.1975 133.3444	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Chloroform CAS # 67-66-3.SEC Purity 99%	(Lot 1297547)	2,501.6	µg/mL	+/- +/- +/-	14.5447 133.1310 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4.SEC Purity 98%	(Lot OGI01)	2,501.9	µg/mL	+/- +/- +/-	14.5465 133.1477 133.2946	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-Dichloro-2-butene CAS # 110-57-6.SEC Purity 97%	(Lot 100700-2)	2,502.7	µg/mL	+/- +/- +/-	14.5510 133.1893 133.3362	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1.SEC Purity 99%	(Lot T2HFC-IT)	2,500.0	µg/mL	+/- +/- +/-	14.5352 133.0445 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1.SEC Purity 99%	(Lot 2FUHG-EM)	2,501.6	µg/mL	+/- +/- +/-	14.5447 133.1310 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	(Lot SC7LO-QA)	2,502.4	µg/mL	+/- +/- +/-	14.5490 133.1709 133.3177	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	(Lot SW8QG-AO)	2,500.5	µg/mL	+/- +/- +/-	14.5381 133.0711 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	(Lot P4XHJ-AO)	2,500.3	µg/mL	+/- +/- +/-	14.5367 133.0578 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	(Lot OGN01)	2,501.6	µg/mL	+/- +/- +/-	14.5447 133.1310 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	(Lot FGH02-CMLN)	2,500.3	µg/mL	+/- +/- +/-	14.5367 133.0578 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	(Lot OGN01)	2,500.1	µg/mL	+/- +/- +/-	14.5359 133.0511 133.1979	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 99%	(Lot 1721700)	2,501.6	µg/mL	+/- +/- +/-	14.5447 133.1310 133.2778	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD-KA)	2,501.5	µg/mL	+/- +/- +/-	14.5439 133.1243 133.2711	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot YWKDC-MK)	2,500.3	µg/mL	+/- +/- +/-	14.5367 133.0578 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	(Lot OGN01)	2,500.6	µg/mL	+/- +/- +/-	14.5388 133.0777 133.2245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot 4NRGF-OT)	2,500.0	µg/mL	+/- +/- +/-	14.5352 133.0445 133.1912	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 97%	(Lot LC00408V)	2,500.5	µg/mL	+/- +/- +/-	14.5383 133.0732 133.2199	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	(Lot OGO01)	2,501.0	µg/mL	+/- +/- +/-	14.5410 133.0977 133.2445	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	(Lot 2009400)	2,501.0	µg/mL	+/- +/- +/-	14.5412 133.0990 133.2458	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3.SEC Purity 99%	(Lot 4KW3H-OO)	2,500.5	µg/mL	+/- +/- +/-	14.5381 133.0711 133.2178	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene	2,502.4	µg/mL	+/-	14.5490	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/-	133.1709	µg/mL	Unstressed
	Purity 99%			+/-	133.3177	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

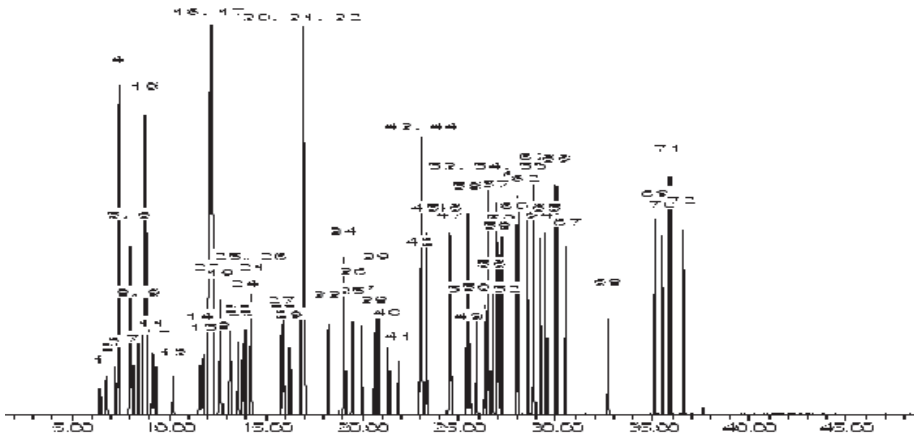
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maje

Date Mixed: 07-Jan-2015 **Balance:** 1127510105

Tyler Brown

Tyler Brown - QA Analyst

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

MV-569720_00001



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569720 Lot No.: A0108166

Description : 8260 List 1 / Std #1 MegaMix (2015)

8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : January 31, 2017 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Diethyl ether (ethyl ether) CAS # 60-29-7 (Lot SHBF3466V) Purity 99%	2,521.3 µg/mL	+/- 14.6588 µg/mL Gravimetric +/- 134.1754 µg/mL Unstressed +/- 134.3233 µg/mL Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 (Lot 00001135) Purity 99%	2,522.5 µg/mL	+/- 14.6660 µg/mL Gravimetric +/- 134.2419 µg/mL Unstressed +/- 134.3899 µg/mL Stressed
3	1,1-Dichloroethane CAS # 75-34-3 (Lot Q179-33) Purity 98%	2,499.5 µg/mL	+/- 14.5323 µg/mL Gravimetric +/- 133.0173 µg/mL Unstressed +/- 133.1640 µg/mL Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 (Lot SHBC6893V) Purity 99%	25,002.4 µg/mL	+/- 145.3584 µg/mL Gravimetric +/- 1,330.5704 µg/mL Unstressed +/- 1,332.0378 µg/mL Stressed
5	Iodomethane (methyl iodide) CAS # 74-88-4 (Lot SHBC7288V) Purity 99%	2,510.0 µg/mL	+/- 14.5934 µg/mL Gravimetric +/- 133.5767 µg/mL Unstressed +/- 133.7240 µg/mL Stressed
6	Methyl acetate CAS # 79-20-9 (Lot SHBD7134V) Purity 98%	12,505.4 µg/mL	+/- 72.7037 µg/mL Gravimetric +/- 665.5101 µg/mL Unstressed +/- 666.2440 µg/mL Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1 (Lot MKBG5777V) Purity 99%	2,500.0 µg/mL	+/- 19.2743 µg/mL Gravimetric +/- 133.6453 µg/mL Unstressed +/- 133.7914 µg/mL Stressed

24	n-Heptane (C7)		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SHBF2321V)			+/-	133.1177	µg/mL	Unstressed
	Purity 99%				+/-	133.2645	µg/mL	Stressed
25	1,2-Dichloroethane		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot SHBC6595V)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
26	Benzene		2,509.1	µg/mL	+/-	14.5883	µg/mL	Gravimetric
	CAS # 71-43-2	(Lot SHBD4617V)			+/-	133.5301	µg/mL	Unstressed
	Purity 99%				+/-	133.6774	µg/mL	Stressed
27	Trichloroethene		2,504.8	µg/mL	+/-	14.5628	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBF0943V)			+/-	133.2973	µg/mL	Unstressed
	Purity 99%				+/-	133.4443	µg/mL	Stressed
28	Methylcyclohexane		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot 50996APV)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
29	1,2-Dichloropropane		2,502.4	µg/mL	+/-	14.5490	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot 01113D0V)			+/-	133.1709	µg/mL	Unstressed
	Purity 99%				+/-	133.3177	µg/mL	Stressed
30	bromodichloromethane		2,507.9	µg/mL	+/-	14.5814	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKBL1617V)			+/-	133.4672	µg/mL	Unstressed
	Purity 98%				+/-	133.6144	µg/mL	Stressed
31	1,4-Dioxane		50,001.4	µg/mL	+/-	290.6971	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBF2002V)			+/-	2,660.9612	µg/mL	Unstressed
	Purity 99%				+/-	2,663.8957	µg/mL	Stressed
32	Dibromomethane		2,508.1	µg/mL	+/-	14.5825	µg/mL	Gravimetric
	CAS # 74-95-3	(Lot 10169264)			+/-	133.4769	µg/mL	Unstressed
	Purity 99%				+/-	133.6241	µg/mL	Stressed
33	cis-1,3-Dichloropropene		2,507.0	µg/mL	+/-	14.5759	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot 20936)			+/-	133.4170	µg/mL	Unstressed
	Purity 99%				+/-	133.5641	µg/mL	Stressed
34	Toluene		2,502.4	µg/mL	+/-	14.5490	µg/mL	Gravimetric
	CAS # 108-88-3	(Lot SHBF2730V)			+/-	133.1709	µg/mL	Unstressed
	Purity 99%				+/-	133.3177	µg/mL	Stressed
35	Ethyl methacrylate		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot 69796APV)			+/-	133.0911	µg/mL	Unstressed
	Purity 99%				+/-	133.2378	µg/mL	Stressed
36	trans-1,3-Dichloropropene		2,502.1	µg/mL	+/-	14.5476	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot C363110)			+/-	133.1576	µg/mL	Unstressed
	Purity 99%				+/-	133.3044	µg/mL	Stressed
37	1,1,2-Trichloroethane		2,507.5	µg/mL	+/-	14.5788	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	133.4436	µg/mL	Unstressed
	Purity 99%				+/-	133.5908	µg/mL	Stressed
38	1,3-Dichloropropane		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric
	CAS # 142-28-9	(Lot BCBG2162V)			+/-	133.3239	µg/mL	Unstressed
	Purity 99%				+/-	133.4709	µg/mL	Stressed
39	Tetrachloroethene		2,506.5	µg/mL	+/-	14.5730	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBD2073V)			+/-	133.3904	µg/mL	Unstressed
	Purity 99%				+/-	133.5375	µg/mL	Stressed

56	Bromobenzene CAS # 108-86-1 Purity 99%	(Lot MKBD4032V)	2,501.1 µg/mL	+/-	14.5418	µg/mL	Gravimetric
				+/-	133.1044	µg/mL	Unstressed
				+/-	133.2511	µg/mL	Stressed
57	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 98%	(Lot MKBJ1732V)	2,501.6 µg/mL	+/-	14.5444	µg/mL	Gravimetric
				+/-	133.1282	µg/mL	Unstressed
				+/-	133.2750	µg/mL	Stressed
58	2-Chlorotoluene CAS # 95-49-8 Purity 99%	(Lot MKBH8892V)	2,500.3 µg/mL	+/-	14.5367	µg/mL	Gravimetric
				+/-	133.0578	µg/mL	Unstressed
				+/-	133.2045	µg/mL	Stressed
59	4-Chlorotoluene CAS # 106-43-4 Purity 99%	(Lot MKBB7205V)	2,506.4 µg/mL	+/-	14.5723	µg/mL	Gravimetric
				+/-	133.3837	µg/mL	Unstressed
				+/-	133.5308	µg/mL	Stressed
60	tert-Butylbenzene CAS # 98-06-6 Purity 99%	(Lot S52237V)	2,500.1 µg/mL	+/-	14.5359	µg/mL	Gravimetric
				+/-	133.0511	µg/mL	Unstressed
				+/-	133.1979	µg/mL	Stressed
61	1,3,5-Trimethylbenzene CAS # 108-67-8 Purity 99%	(Lot BCBJ3305V)	2,503.1 µg/mL	+/-	14.5534	µg/mL	Gravimetric
				+/-	133.2108	µg/mL	Unstressed
				+/-	133.3577	µg/mL	Stressed
62	sec-Butylbenzene CAS # 135-98-8 Purity 99%	(Lot MKBK3151V)	2,504.0 µg/mL	+/-	14.5585	µg/mL	Gravimetric
				+/-	133.2574	µg/mL	Unstressed
				+/-	133.4043	µg/mL	Stressed
63	p-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	(Lot MKBK4439V)	2,501.1 µg/mL	+/-	14.5418	µg/mL	Gravimetric
				+/-	133.1044	µg/mL	Unstressed
				+/-	133.2511	µg/mL	Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBC1891V)	2,506.1 µg/mL	+/-	14.5708	µg/mL	Gravimetric
				+/-	133.3704	µg/mL	Unstressed
				+/-	133.5175	µg/mL	Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBL3891V)	2,507.0 µg/mL	+/-	14.5759	µg/mL	Gravimetric
				+/-	133.4170	µg/mL	Unstressed
				+/-	133.5641	µg/mL	Stressed
66	n-Butylbenzene CAS # 104-51-8 Purity 99%	(Lot 09418JJV)	2,502.6 µg/mL	+/-	14.5505	µg/mL	Gravimetric
				+/-	133.1842	µg/mL	Unstressed
				+/-	133.3311	µg/mL	Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot 68996CMV)	2,501.6 µg/mL	+/-	14.5447	µg/mL	Gravimetric
				+/-	133.1310	µg/mL	Unstressed
				+/-	133.2778	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	2,505.9 µg/mL	+/-	14.5694	µg/mL	Gravimetric
				+/-	133.3571	µg/mL	Unstressed
				+/-	133.5042	µg/mL	Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot 26896BM)	2,501.5 µg/mL	+/-	14.5439	µg/mL	Gravimetric
				+/-	133.1243	µg/mL	Unstressed
				+/-	133.2711	µg/mL	Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot K22W009)	2,501.6 µg/mL	+/-	14.5444	µg/mL	Gravimetric
				+/-	133.1282	µg/mL	Unstressed
				+/-	133.2750	µg/mL	Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBH4351V)	2,502.6 µg/mL	+/-	14.5505	µg/mL	Gravimetric
				+/-	133.1842	µg/mL	Unstressed
				+/-	133.3311	µg/mL	Stressed

Reagent

MV-569721.sec_00002



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec Lot No.: A0112937
Description : 8260 List 1/ Std #2 Ketones (2015)
8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : July 31, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Acetone CAS # 67-64-1.SEC (Lot P14A572) Purity 99%	12,501.5 µg/mL	+/- 73.1990 µg/mL Gravimetric +/- 665.3586 µg/mL Unstressed +/- 666.0923 µg/mL Stressed
2	2-Butanone (MEK) CAS # 78-93-3.SEC (Lot RA58J) Purity 99%	12,506.0 µg/mL	+/- 73.2254 µg/mL Gravimetric +/- 665.5981 µg/mL Unstressed +/- 666.3320 µg/mL Stressed
3	4-Methyl-2-pentanone (MIBK) CAS # 108-10-1.SEC (Lot E29T040) Purity 99%	12,525.0 µg/mL	+/- 73.3366 µg/mL Gravimetric +/- 666.6094 µg/mL Unstressed +/- 667.3444 µg/mL Stressed
4	2-Hexanone CAS # 591-78-6.SEC (Lot ZSVCD-FF) Purity 99%	12,513.5 µg/mL	+/- 73.2693 µg/mL Gravimetric +/- 665.9973 µg/mL Unstressed +/- 666.7316 µg/mL Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

MV-569721_00003



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Catalog No.: 569721 Lot No.: A0115554
Description: 8260 List 1/ Std #2 Ketones (2015)
8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul
Container Size: 2 mL Pkg Amt: > 1 mL
Expiration Date: November 30, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Acetone CAS # 67-64-1 (Lot 07196AK) Purity 99%	12,501.8 µg/mL	+/- 72.6865 µg/mL Gravimetric +/- 754.2890 µg/mL Unstressed +/- 756.0798 µg/mL Stressed
2	2-Butanone (MEK) CAS # 78-93-3 (Lot SHBG0444V) Purity 98%	12,499.7 µg/mL	+/- 72.6744 µg/mL Gravimetric +/- 754.1625 µg/mL Unstressed +/- 755.9530 µg/mL Stressed
3	4-Methyl-2-pentanone (MIBK) CAS # 108-10-1 (Lot SHBF9556V) Purity 99%	12,500.6 µg/mL	+/- 72.6796 µg/mL Gravimetric +/- 754.2166 µg/mL Unstressed +/- 756.0072 µg/mL Stressed
4	2-Hexanone CAS # 591-78-6 (Lot MKBT3158V) Purity 99%	12,502.4 µg/mL	+/- 72.6900 µg/mL Gravimetric +/- 754.3252 µg/mL Unstressed +/- 756.1161 µg/mL Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

MV-569722.sec_00002



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Catalog No. : 569722.SEC Lot No.: A0113063
Description : 8260 List 1 / Std #3 Gases (2015)
8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : August 31, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,500.3 µg/mL	+/- 18.8969	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 21773)		+/- 30.6711	µg/mL	Unstressed
	Purity 99%		+/- 34.6178	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,502.2 µg/mL	+/- 22.3652	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 32.9346	µg/mL	Unstressed
	Purity 99%		+/- 36.6435	µg/mL	Stressed
3	Vinyl chloride	2,507.8 µg/mL	+/- 20.2660	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 31.5880	µg/mL	Unstressed
	Purity 99%		+/- 35.4543	µg/mL	Stressed
4	1,3-Butadiene	2,524.8 µg/mL	+/- 19.2677	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/- 31.0859	µg/mL	Unstressed
	Purity 99%		+/- 35.0581	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,510.7 µg/mL	+/- 24.3913	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 34.4006	µg/mL	Unstressed
	Purity 99%		+/- 37.9896	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,499.3 µg/mL	+/- 20.7673	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 31.8496	µg/mL	Unstressed
	Purity 99%		+/- 35.6630	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,511.4 µg/mL	+/- 18.9807	µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 30.8071	µg/mL	Unstressed
	Purity 99%		+/- 34.7713	µg/mL	Stressed

Reagent

MV-569722_00004



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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 Lot No.: A0118719

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : April 30, 2019 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot Q167-08) Purity 99%	2,504.2 µg/mL	+/- 18.7109 µg/mL Gravimetric +/- 140.8995 µg/mL Unstressed +/- 144.1737 µg/mL Stressed
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBG1480V) Purity 99%	2,500.6 µg/mL	+/- 18.9897 µg/mL Gravimetric +/- 140.7385 µg/mL Unstressed +/- 144.0070 µg/mL Stressed
3	Vinyl chloride CAS # 75-01-4 (Lot 25LPST) Purity 99%	2,499.8 µg/mL	+/- 20.8058 µg/mL Gravimetric +/- 140.9486 µg/mL Unstressed +/- 144.2103 µg/mL Stressed
4	1,3-Butadiene CAS # 106-99-0 (Lot SHBF3387V) Purity 99%	2,500.6 µg/mL	+/- 21.2874 µg/mL Gravimetric +/- 141.0663 µg/mL Unstressed +/- 144.3274 µg/mL Stressed
5	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	2,500.1 µg/mL	+/- 22.8576 µg/mL Gravimetric +/- 141.2859 µg/mL Unstressed +/- 144.5409 µg/mL Stressed
6	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot SHBD1717V) Purity 99%	2,500.3 µg/mL	+/- 19.5969 µg/mL Gravimetric +/- 140.8062 µg/mL Unstressed +/- 144.0725 µg/mL Stressed
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 (Lot Q9B-58) Purity 99%	2,504.7 µg/mL	+/- 19.5937 µg/mL Gravimetric +/- 141.0449 µg/mL Unstressed +/- 144.3170 µg/mL Stressed

8	Trichlorofluoromethane (CFC-11)	2,497.3	µg/mL	+/-	18.0543	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBF6387V)			+/-	140.4322	µg/mL	Unstressed
	Purity 99%			+/-	143.6992	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

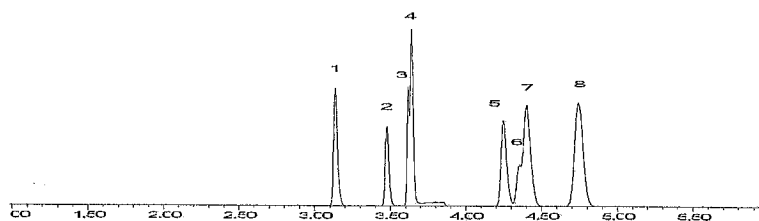
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Ceryll Graham
Ceryll Graham - Mix Technician

Date Mixed: 13-Apr-2016

Balance: 1125113331

Jennifer L. Pollino
Jennifer L. Pollino - QC Analyst

Date Passed: 19-Apr-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569723_00001



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 Lot No.: A0110788
Description : 8260 List 1 / Std #4 2-CEVE (2015)
8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : April 30, 2018 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Chloroethyl vinyl ether CAS # 110-75-8 (Lot MKBK2735V) Purity 99%	2,513.0 µg/mL	+/- 14.7477 µg/mL Gravimetric +/- 53.3319 µg/mL Unstressed +/- 53.5682 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

MV-569724.sec_00007



CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0118759

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2016 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Vinyl acetate CAS # 108-05-4 Purity 99% (Lot STBD7333V)	5,002.0 µg/mL	+/- 29.3545 µg/mL Gravimetric +/- 301.8192 µg/mL Unstressed +/- 302.5356 µg/mL Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Column:

105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:

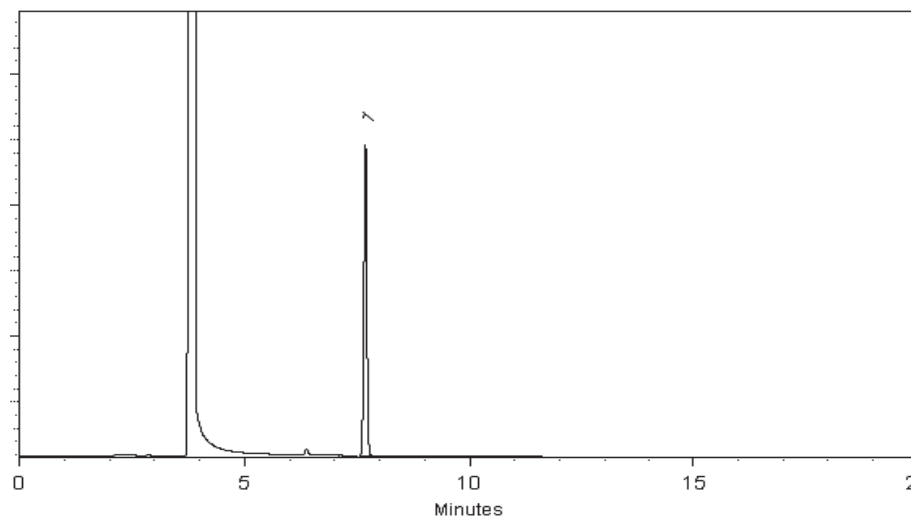
200°C

Det. Temp:

250°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


F. Joseph Tallon - Mix Technician

Date Mixed: 18-Apr-2016

Balance: B251644995


Jodi E. Breon - QA Analyst

Date Passed: 20-Apr-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569727_00005



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 Lot No.: A0116621
Description : 8260 List 2/ Std #3 Cyclohexanone (2015)
8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : January 31, 2019 Storage: 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Cyclohexanone CAS # 108-94-1 Purity 99% (Lot MKBN5282V)	25,086.7 µg/mL	+/- 146.8879 µg/mL Gravimetric +/- 1,513.6896 µg/mL Unstressed +/- 1,517.2828 µg/mL Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

mv-569728_00001



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



4 x/mL
REC 2/3/15 One

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569728 Lot No.: A0108216

Description : 8260 List 3/ Std#1 Polar Additions (2015)
8260 List 3/ Std#1 Polar Additions (2015) 2500-100,000 µg/ml, 1 ml/ampul

Container Size : 2 ml Pkg Amt: > 1 mL
Expiration Date : January 31, 2017 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Ethanol CAS # 64-17-5 (Lot PG0219) Purity 99%	100,006.7 µg/mL	+/- 585.5308 µg/mL Gravimetric +/- 3,484.8988 µg/mL Unstressed +/- 3,604.3075 µg/mL Stressed
2	Acetonitrile CAS # 75-05-8 (Lot SHBB3177V) Purity 99%	25,004.7 µg/mL	+/- 146.4078 µg/mL Gravimetric +/- 871.3305 µg/mL Unstressed +/- 901.1862 µg/mL Stressed
3	Diisopropyl ether (DIPE) CAS # 108-20-3 (Lot SHBB6268V) Purity 99%	2,501.3 µg/mL	+/- 14.6792 µg/mL Gravimetric +/- 87.1689 µg/mL Unstressed +/- 90.1553 µg/mL Stressed
4	Ethyl-tert-butyl ether (ETBE) CAS # 637-92-3 (Lot MKBR1623V) Purity 99%	2,500.7 µg/mL	+/- 14.6753 µg/mL Gravimetric +/- 87.1456 µg/mL Unstressed +/- 90.1313 µg/mL Stressed
5	Propionitrile CAS # 107-12-0 (Lot BCBK0700V) Purity 99%	25,001.3 µg/mL	+/- 146.3883 µg/mL Gravimetric +/- 871.2144 µg/mL Unstressed +/- 901.0661 µg/mL Stressed
6	tert-Amyl alcohol CAS # 75-85-4 (Lot STBB1898V) Purity 99%	25,006.0 µg/mL	+/- 146.4156 µg/mL Gravimetric +/- 871.3770 µg/mL Unstressed +/- 901.2343 µg/mL Stressed
7	tert-Amyl methyl ether (TAME) CAS # 994-05-8 (Lot OS1028/4V) Purity 99%	2,502.0 µg/mL	+/- 14.6831 µg/mL Gravimetric +/- 87.1921 µg/mL Unstressed +/- 90.1793 µg/mL Stressed

Reagent

mv-570808_00001



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808.sec Lot No.: A0116135
Description : 8260 List 2 / Std #6
8260 List 2 / Std #6 2500-62500 µg/ml, P&T Methanol, 1 ml/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : June 30, 2017 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Propanol (isopropanol) CAS # 67-63-0.SEC (Lot NWVYK) Purity 98%	25,004.1 µg/mL	+/- 146.4046 µg/mL Gravimetric +/- 1,237.0209 µg/mL Unstressed +/- 1,267.7746 µg/mL Stressed
2	Chloroprene CAS # 126-99-8.A * (Lot 151210JLM) Purity 99%	2,502.4 µg/mL	+/- 14.6855 µg/mL Gravimetric +/- 123.8044 µg/mL Unstressed +/- 126.8822 µg/mL Stressed
3	Methacrylonitrile CAS # 126-98-7 * (Lot 1012014) Purity 99%	25,001.6 µg/mL	+/- 146.3899 µg/mL Gravimetric +/- 1,236.8966 µg/mL Unstressed +/- 1,267.6472 µg/mL Stressed
4	2,2,4-Trimethylpentane (Isooctane) CAS # 540-84-1.SEC (Lot 1894700) Purity 99%	2,500.8 µg/mL	+/- 14.6761 µg/mL Gravimetric +/- 123.7253 µg/mL Unstressed +/- 126.8010 µg/mL Stressed
5	1-Butanol CAS # 71-36-3.SEC (Lot QBO2D) Purity 99%	62,500.0 µg/mL	+/- 365.9324 µg/mL Gravimetric +/- 3,092.0415 µg/mL Unstressed +/- 3,168.9130 µg/mL Stressed
6	2-Nitropropane CAS # 79-46-9.SEC (Lot KW38H-RN) Purity 98%	5,000.4 µg/mL	+/- 29.2782 µg/mL Gravimetric +/- 247.3809 µg/mL Unstressed +/- 253.5311 µg/mL Stressed
7	1-Chlorohexane CAS # 544-10-5.SEC (Lot 3890000) Purity 98%	2,500.2 µg/mL	+/- 14.6724 µg/mL Gravimetric +/- 123.6944 µg/mL Unstressed +/- 126.7694 µg/mL Stressed

Reagent

mv-570809_00001



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809.sec Lot No.: A0116080

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2500-5000 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : June 30, 2017 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)
1	Ethyl acetate CAS # 141-78-6.SEC (Lot C386A-GG) Purity 99%	5,000.4 µg/mL	+/- 29.2784 µg/mL Gravimetric +/- 301.7162 µg/mL Unstressed +/- 302.4324 µg/mL Stressed
2	Ethyl acrylate CAS # 140-88-5.SEC (Lot YIFAM-TG) Purity 99%	2,501.2 µg/mL	+/- 14.6784 µg/mL Gravimetric +/- 150.9217 µg/mL Unstressed +/- 151.2799 µg/mL Stressed
3	Methyl methacrylate CAS # 80-62-6.SEC (Lot G01X021) Purity 99%	5,002.0 µg/mL	+/- 29.2878 µg/mL Gravimetric +/- 301.8127 µg/mL Unstressed +/- 302.5292 µg/mL Stressed
4	Butyl acetate CAS # 123-86-4.SEC (Lot V2L2G-GT) Purity 99%	2,501.6 µg/mL	+/- 14.6808 µg/mL Gravimetric +/- 150.9458 µg/mL Unstressed +/- 151.3041 µg/mL Stressed
Solvent:	P&T Methanol CAS # 67-56-1 Purity 99%		

Reagent

MV-CUS17739_00001

5x/mL
REC 7/13/15 GM

Certificate of Analysis

Custom Standard

Product Number CUS-17739

Page: 1 of 1

Lot Number: CM-3152

Lot Issue Date: 09-Jun-2015

Expiration Date: 31-Jul-2017

This certified Reference Material (RM) was manufactured and verified in accordance with ULTRA Scientific's ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
1-chlorohexane	000544-10-5	NT01968	1003 ± 5 µg/mL
2-pentanone	000107-87-9	RM03775	4010 ± 20 µg/mL
sec-butanol	000078-92-2	RM01299	30094 ± 150 µg/mL

Matrix: methanol (purge & trap grade)

Storage: Store at < 4°C.

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.



ISO 9001
Registered
TUV USA, Inc.

William J. Leary
Quality Assurance Manager

Reagent

mv-VO-TAOH-5_00001



Reference Materials Producer
Cert #2495.01

SPEX[®]ertificate

Certificate of Reference Material



Chemical Testing
Cert #2495.02

Catalog Number: VO-TAOH-5

Lot No. BW160504027

Description: Custom Organic Standard

Matrix: Methanol (Purge & Trap Grade)

Manufactured Date: 5-4-2016

Expiration Date: 5-4-2017

This SPEXOrganics[®] Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

<u>Compound</u>	<u>CAS #</u>	<u>Labeled</u>	<u>Purity</u>	<u>Certified†</u>	<u>Uncertainty</u>
Propylene oxide	75-56-9	50000 µg/mL	99%	49963 µg/mL	± 1749 µg/mL
Ethylene oxide	75-21-8	50000 µg/mL	99.8%	50892 µg/mL	± 1781 µg/mL
cis-1,4-Dichloro-2-butene	1476-11-5	1000 µg/mL	95%	999 µg/mL	± 35 µg/mL
Tetrahydrothiophene	110-01-0	1000 µg/mL	99%	994 µg/mL	± 35 µg/mL

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 5-4-2016

Certifying Officer:

Julian Burton

Method 8260B

Volatile Organic Compounds (GC/MS)
by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Matrix: Water Level: Low
GC Column (1): DB-624 (75. ID: 0.53 (mm))

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
LL5mw-002-102616-G W	280-90232-1	110	98	93	96
LL5mw-006-102616-G W	280-90232-2	112	106	119 Q	117 Q
TRIP BLANK	280-90232-3	110	96	94	95
	MB 280-350526/6	111	99	93	97
	MB 280-350742/6	100	102	109	97
	LCS 280-350526/4	105	100	94	91
	LCS 280-350742/4	88	90	98	85

	<u>QC LIMITS</u>
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: H1444.D
 Lab ID: LCS 280-350526/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	5.28	106	74-131	
1,1,2,2-Tetrachloroethane	5.00	3.91	78	71-121	
1,1,2-Trichloroethane	5.00	4.94	99	80-119	
1,1-Dichloroethane	5.00	4.55	91	77-125	
1,1-Dichloroethene	5.00	5.03	101	71-131	
1,2-Dibromoethane	5.00	4.82	96	77-121	
1,2-Dichloroethane	5.00	5.13	103	73-128	
1,2-Dichloroethene, Total	10.0	10.3	103	79-121	
1,2-Dichloropropane	5.00	4.45	89	78-122	
2-Butanone (MEK)	20.0	17.6	88	56-143	
2-Hexanone	20.0	18.0	90	57-139	
4-Methyl-2-pentanone (MIBK)	20.0	20.8	104	67-130	
Acetone	20.0	18.7	93	39-160	
Benzene	5.00	4.95	99	79-120	
Bromochloromethane	5.00	5.39	108	78-123	
Bromodichloromethane	5.00	4.84	97	79-125	
Bromoform	5.00	5.14	103	66-130	
Bromomethane	5.00	6.09	122	53-141	
Carbon disulfide	5.00	5.00	100	64-133	
Carbon tetrachloride	5.00	5.58	112	72-136	
Chlorobenzene	5.00	4.86	97	82-118	
Chloroethane	5.00	5.13	103	60-138	
Chloroform	5.00	4.96	99	79-124	
Chloromethane	5.00	5.15	103	50-139	
cis-1,3-Dichloropropene	5.00	4.55	91	75-124	
Dibromochloromethane	5.00	4.73	95	74-126	
Ethylbenzene	5.00	4.84	97	79-121	
Methylene Chloride	5.00	5.79	116	74-124	
Styrene	5.00	4.79	96	78-123	
Tetrachloroethene	5.00	5.43	109	74-129	
Toluene	5.00	5.14	103	80-121	
trans-1,3-Dichloropropene	5.00	5.03	101	73-127	
Trichloroethene	5.00	5.01	100	79-123	
Vinyl chloride	5.00	5.71	114	58-137	
Xylenes, Total	10.0	9.77	98	79-121	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: P3849.D
 Lab ID: LCS 280-350742/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	5.14	103	74-131	
1,1,2,2-Tetrachloroethane	5.00	4.92	98	71-121	
1,1,2-Trichloroethane	5.00	5.62	112	80-119	
1,1-Dichloroethane	5.00	5.23	105	77-125	
1,1-Dichloroethene	5.00	5.58	112	71-131	
1,2-Dibromoethane	5.00	5.23	105	77-121	
1,2-Dichloroethane	5.00	5.03	101	73-128	
1,2-Dichloroethene, Total	10.0	11.0	110	79-121	
1,2-Dichloropropane	5.00	5.50	110	78-122	
2-Butanone (MEK)	20.0	18.5	92	56-143	
2-Hexanone	20.0	16.0	80	57-139	
4-Methyl-2-pentanone (MIBK)	20.0	17.8	89	67-130	
Acetone	20.0	18.4	92	39-160	
Benzene	5.00	5.49	110	79-120	
Bromochloromethane	5.00	5.73	115	78-123	
Bromodichloromethane	5.00	5.26	105	79-125	
Bromoform	5.00	5.16	103	66-130	
Bromomethane	5.00	5.57	111	53-141	
Carbon disulfide	5.00	5.82	116	64-133	
Carbon tetrachloride	5.00	5.42	108	72-136	
Chlorobenzene	5.00	5.24	105	82-118	
Chloroethane	5.00	4.64	93	60-138	
Chloroform	5.00	5.25	105	79-124	
Chloromethane	5.00	4.17	83	50-139	
cis-1,3-Dichloropropene	5.00	4.34	87	75-124	
Dibromochloromethane	5.00	4.62	92	74-126	
Ethylbenzene	5.00	5.40	108	79-121	
Methylene Chloride	5.00	6.20	124	74-124	
Styrene	5.00	5.22	104	78-123	
Tetrachloroethene	5.00	5.27	105	74-129	
Toluene	5.00	5.71	114	80-121	
trans-1,3-Dichloropropene	5.00	5.11	102	73-127	
Trichloroethene	5.00	5.02	100	79-123	
Vinyl chloride	5.00	4.82	96	58-137	
Xylenes, Total	10.0	10.8	108	79-121	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab File ID: H1446.D Lab Sample ID: MB 280-350526/6
Matrix: Water Heated Purge: (Y/N) N
Instrument ID: VMS_H Date Analyzed: 11/09/2016 08:40
GC Column: DB-624 (75.53) ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-350526/4	H1444.D	11/09/2016 07:52
LL5mw-002-102616-GW	280-90232-1	H1461.D	11/09/2016 14:43
TRIP BLANK	280-90232-3	H1463.D	11/09/2016 15:31

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab File ID: P3848.D Lab Sample ID: MB 280-350742/6
Matrix: Water Heated Purge: (Y/N) N
Instrument ID: VMS_P Date Analyzed: 11/10/2016 09:29
GC Column: DB-624 (60.25) ID: 0.25 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-350742/4	P3849.D	11/10/2016 09:48
LL5mw-006-102616-GW	280-90232-2	P3864.D	11/10/2016 14:43

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab File ID: H9955.D BFB Injection Date: 10/07/2016
 Instrument ID: VMS_H BFB Injection Time: 21:00
 Analysis Batch No.: 345574

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	18.5
75	30.0 - 60.0 % of mass 95	43.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.6
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	73.9
175	5.0 - 9.0 % of mass 174	6.0 (8.1) 1
176	95.0 - 101.0 % of mass 174	73.1 (98.9) 1
177	5.0 - 9.0 % of mass 176	4.5 (6.1) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-345574/24	H9967.D	10/08/2016	01:33
	IC 280-345574/25	H9968.D	10/08/2016	01:56
	IC 280-345574/26	H9969.D	10/08/2016	02:19
	ICIS 280-345574/27	H9970.D	10/08/2016	02:43
	IC 280-345574/28	H9971.D	10/08/2016	03:06
	IC 280-345574/29	H9972.D	10/08/2016	03:30
	ICV 280-345574/30	H9974.D	10/08/2016	04:16

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab File ID: H1082.D BFB Injection Date: 11/02/2016
 Instrument ID: VMS_H BFB Injection Time: 10:27
 Analysis Batch No.: 349323

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	17.5
75	30.0 - 60.0 % of mass 95	41.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.6
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	71.0
175	5.0 - 9.0 % of mass 174	5.7 (8.1) 1
176	95.0 - 101.0 % of mass 174	69.3 (97.6) 1
177	5.0 - 9.0 % of mass 176	4.9 (7.0) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 280-349323/10	H1084.D	11/02/2016	10:59
	IC 280-349323/11	H1085.D	11/02/2016	11:23
	IC 280-349323/12	H1086.D	11/02/2016	11:47
	IC 280-349323/13	H1087.D	11/02/2016	12:11
	ICIS 280-349323/14	H1088.D	11/02/2016	12:35
	IC 280-349323/15	H1089.D	11/02/2016	12:59
	IC 280-349323/16	H1090.D	11/02/2016	13:22
	ICV 280-349323/17	H1095.D	11/02/2016	15:24

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab File ID: H1441.D BFB Injection Date: 11/09/2016
 Instrument ID: VMS_H BFB Injection Time: 06:52
 Analysis Batch No.: 350526

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	16.0
75	30.0 - 60.0 % of mass 95	41.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	78.7
175	5.0 - 9.0 % of mass 174	6.6 (8.4) 1
176	95.0 - 101.0 % of mass 174	77.8 (98.7) 1
177	5.0 - 9.0 % of mass 176	5.3 (6.8) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-350526/2	H1442.D	11/09/2016	07:04
	CCV 280-350526/3	H1443.D	11/09/2016	07:28
	LCS 280-350526/4	H1444.D	11/09/2016	07:52
	MB 280-350526/6	H1446.D	11/09/2016	08:40
LL5mw-002-102616-GW	280-90232-1	H1461.D	11/09/2016	14:43
TRIP BLANK	280-90232-3	H1463.D	11/09/2016	15:31
	CCVC 280-350526/34	H1466.D	11/09/2016	16:44

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab File ID: P1835.D BFB Injection Date: 09/13/2016
 Instrument ID: VMS_P BFB Injection Time: 08:16
 Analysis Batch No.: 341836

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	22.8
75	30.0 - 60.0 % of mass 95	51.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	8.0
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	74.7
175	5.0 - 9.0 % of mass 174	5.4 (7.2) 1
176	95.0 - 101.0 % of mass 174	73.1 (97.8) 1
177	5.0 - 9.0 % of mass 176	4.7 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD010 280-341836/21	P1846.D	09/13/2016	12:16
	STD020 280-341836/22	P1847.D	09/13/2016	12:35
	STD050 280-341836/23	P1848.D	09/13/2016	12:55
	ICIS 280-341836/24	P1849.D	09/13/2016	13:14
	STD30 280-341836/25	P1850.D	09/13/2016	13:34
	STD60 280-341836/26	P1851.D	09/13/2016	13:53
	ICV 280-341836/27	P1853.D	09/13/2016	14:32

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab File ID: P2898.D BFB Injection Date: 10/20/2016
 Instrument ID: VMS_P BFB Injection Time: 08:31
 Analysis Batch No.: 347337

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	25.7
75	30.0 - 60.0 % of mass 95	57.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.3
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	72.0
175	5.0 - 9.0 % of mass 174	5.7 (7.9) 1
176	95.0 - 101.0 % of mass 174	70.1 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.9 (7.0) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD003 280-347337/10	P2900.D	10/20/2016	09:54
	STD010 280-347337/11	P2901.D	10/20/2016	10:14
	STD020 280-347337/12	P2902.D	10/20/2016	10:33
	STD050 280-347337/13	P2903.D	10/20/2016	10:53
	ICIS 280-347337/14	P2904.D	10/20/2016	11:12
	STD30 280-347337/15	P2905.D	10/20/2016	11:32
	STD60 280-347337/16	P2906.D	10/20/2016	11:51
	ICV 280-347337/17	P2908.D	10/20/2016	12:30

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab File ID: P3691.D BFB Injection Date: 11/07/2016
 Instrument ID: VMS_P BFB Injection Time: 08:28
 Analysis Batch No.: 350126

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.9
75	30.0 - 60.0 % of mass 95	49.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	8.0
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	83.9
175	5.0 - 9.0 % of mass 174	6.2 (7.4) 1
176	95.0 - 101.0 % of mass 174	80.7 (96.2) 1
177	5.0 - 9.0 % of mass 176	5.5 (6.9) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD010 280-350126/10	P3699.D	11/07/2016	11:12
	STD020 280-350126/11	P3700.D	11/07/2016	11:32
	STD050 280-350126/12	P3701.D	11/07/2016	11:51
	STD10 280-350126/13	P3702.D	11/07/2016	12:11
	STD30 280-350126/14	P3703.D	11/07/2016	12:30
	STD60 280-350126/15	P3704.D	11/07/2016	12:50
	ICV 280-350126/16	P3705.D	11/07/2016	13:10

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab File ID: P3843.D BFB Injection Date: 11/10/2016
 Instrument ID: VMS_P BFB Injection Time: 07:45
 Analysis Batch No.: 350742

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.8
75	30.0 - 60.0 % of mass 95	53.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.4
173	Less than 2.0 % of mass 174	0.5 (0.6) 1
174	50.0 - 120.00 % of mass 95	79.7
175	5.0 - 9.0 % of mass 174	6.2 (7.8) 1
176	95.0 - 101.0 % of mass 174	76.6 (96.1) 1
177	5.0 - 9.0 % of mass 176	4.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-350742/2	P3844.D	11/10/2016	08:09
	CCV 280-350742/3	P3845.D	11/10/2016	08:29
	MB 280-350742/6	P3848.D	11/10/2016	09:29
	LCS 280-350742/4	P3849.D	11/10/2016	09:48
LL5mw-006-102616-GW	280-90232-2	P3864.D	11/10/2016	14:43
	CCVC 280-350742/37	P3873.D	11/10/2016	17:40

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-345574/27 Date Analyzed: 10/08/2016 02:43
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H9970.D Heated Purge: (Y/N) N
 Calibration ID: 27260

	TBA _d 9		FB		CBN _{Zd} 5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	250628	3.99	1569695	6.77	425379	11.13
UPPER LIMIT	501256	4.49	3139390	7.27	850758	11.63
LOWER LIMIT	125314	3.49	784848	6.27	212690	10.63
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 280-345574/30		303491	4.00	1682754	6.77	464237 11.13
CCV 280-350526/2		235451	3.98	1236087	6.75	311123 11.09
CCV 280-350526/3		229961	3.98	1233730	6.75	333747 11.08
LCS 280-350526/4		244924	3.98	1283943	6.75	329530 11.09
MB 280-350526/6		233197	4.00	1218022	6.75	333332 11.09
280-90232-1	LL5mw-002-102616-GW	249590	4.00	1286116	6.76	349203 11.08
280-90232-3	TRIP BLANK	269726	4.00	1295198	6.77	345380 11.11
CCVC 280-350526/34		230394	3.98	1209393	6.77	305162 11.10

TBA_d9 = TBA-d₉ (IS)

FB = Fluorobenzene

CBN_{Zd}5 = Chlorobenzene-d₅

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-345574/27 Date Analyzed: 10/08/2016 02:43
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H9970.D Heated Purge: (Y/N) N
 Calibration ID: 27260

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		678120	14.12				
UPPER LIMIT		1356240	14.62				
LOWER LIMIT		339060	13.62				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-345574/30		726975	14.12				
CCV 280-350526/2		532812	14.10				
CCV 280-350526/3		563343	14.10				
LCS 280-350526/4		576172	14.09				
MB 280-350526/6		546033	14.08				
280-90232-1	LL5mw-002-102616-GW	585007	14.10				
280-90232-3	TRIP BLANK	587968	14.10				
CCVC 280-350526/34		525917	14.10				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-349323/14 Date Analyzed: 11/02/2016 12:35
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H1088.D Heated Purge: (Y/N) N
 Calibration ID: 27466

		TBA _d 9		FB		CBN _{zd} 5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		217375	4.02	1207728	6.81	274920	11.16
UPPER LIMIT		434750	4.52	2415456	7.31	549840	11.66
LOWER LIMIT		108688	3.52	603864	6.31	137460	10.66
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-349323/17		205713	4.02	1238923	6.78	278764	11.14
CCV 280-350526/2		235451	3.98	1236087	6.75	311123	11.09
CCV 280-350526/3		229961	3.98	1233730	6.75	333747	11.08
LCS 280-350526/4		244924	3.98	1283943	6.75	329530	11.09
MB 280-350526/6		233197	4.00	1218022	6.75	333332	11.09
280-90232-1	LL5mw-002-102616-GW	249590	4.00	1286116	6.76	349203	11.08
280-90232-3	TRIP BLANK	269726	4.00	1295198	6.77	345380	11.11
CCVC 280-350526/34		230394	3.98	1209393	6.77	305162	11.10

TBA_d9 = TBA-d₉ (IS)

FB = Fluorobenzene

CBN_{Zd}5 = Chlorobenzene-d₅

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-349323/14 Date Analyzed: 11/02/2016 12:35
 Instrument ID: VMS_H GC Column: DB-624 (75.53) ID: 0.53 (mm)
 Lab File ID (Standard): H1088.D Heated Purge: (Y/N) N
 Calibration ID: 27466

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		453339	14.14				
UPPER LIMIT		906678	14.64				
LOWER LIMIT		226670	13.64				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-349323/17		460656	14.13				
CCV 280-350526/2		532812	14.10				
CCV 280-350526/3		563343	14.10				
LCS 280-350526/4		576172	14.09				
MB 280-350526/6		546033	14.08				
280-90232-1	LL5mw-002-102616-GW	585007	14.10				
280-90232-3	TRIP BLANK	587968	14.10				
CCVC 280-350526/34		525917	14.10				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-341836/24 Date Analyzed: 09/13/2016 13:14
 Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25 (mm)
 Lab File ID (Standard): P1849.D Heated Purge: (Y/N) N
 Calibration ID: 26995

	TBAd9		FB		CBNZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
INITIAL CALIBRATION MID-POINT	99422	5.67	1030520	7.64	190476	9.90	
UPPER LIMIT	198844	6.17	2061040	8.14	380952	10.40	
LOWER LIMIT	49711	5.17	515260	7.14	95238	9.40	
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-341836/27		110197	5.67	1070109	7.64	201656	9.91

TBA_d9 = TBA-d₉ (IS)

FB = Fluorobenzene

CBN_{Zd}5 = Chlorobenzene-d₅

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-341836/24 Date Analyzed: 09/13/2016 13:14
 Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25 (mm)
 Lab File ID (Standard): P1849.D Heated Purge: (Y/N) N
 Calibration ID: 26995

	DCBd4					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	280012	11.74				
UPPER LIMIT	560024	12.24				
LOWER LIMIT	140006	11.24				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 280-341836/27		289071	11.74			

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-347337/14 Date Analyzed: 10/20/2016 11:12
 Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25 (mm)
 Lab File ID (Standard): P2904.D Heated Purge: (Y/N) N
 Calibration ID: 27333

	TBAd9		FB		CBNZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
INITIAL CALIBRATION MID-POINT	163951	5.64	1553291	7.62	317797	9.88	
UPPER LIMIT	327902	6.14	3106582	8.12	635594	10.38	
LOWER LIMIT	81976	5.14	776646	7.12	158899	9.38	
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-347337/17		176921	5.65	1833301	7.62	379274	9.88
CCV 280-350742/2		194458	5.66	1996904	7.62	451651	9.88
CCV 280-350742/3		197363	5.64	2011974	7.62	440547	9.88
MB 280-350742/6		170269	5.66	1901941	7.62	396536	9.88
LCS 280-350742/4		209864	5.65	2183514	7.62	482580	9.88
280-90232-2	LL5mw-006-102616-GW	236823	5.64	2605453	7.62	560378	9.88
CCVC 280-350742/37		464183Q	5.65	5124813Q	7.62	1214580Q	9.88

TBA_d9 = TBA-d9 (IS)

FB = Fluorobenzene

CBN_{Zd}5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Sample No.: ICIS 280-347337/14 Date Analyzed: 10/20/2016 11:12
 Instrument ID: VMS_P GC Column: DB-624 (60.25) ID: 0.25 (mm)
 Lab File ID (Standard): P2904.D Heated Purge: (Y/N) N
 Calibration ID: 27333

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		504583	11.71				
UPPER LIMIT		1009166	12.21				
LOWER LIMIT		252292	11.21				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-347337/17		578591	11.71				
CCV 280-350742/2		809933	11.71				
CCV 280-350742/3		637409	11.71				
MB 280-350742/6		577818	11.71				
LCS 280-350742/4		843142	11.71				
280-90232-2	LL5mw-006-102616-GW	786468	11.71				
CCVC 280-350742/37		1894957Q	11.71				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = $\pm$ 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Client Sample ID: LL5mw-002-102616-GW Lab Sample ID: 280-90232-1

Matrix: Water Lab File ID: H1461.D

Analysis Method: 8260B Date Collected: 10/26/2016 10:35

Sample wt/vol: 20 (mL) Date Analyzed: 11/09/2016 14:43

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 350526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.93	J	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Client Sample ID: LL5mw-002-102616-GW Lab Sample ID: 280-90232-1
Matrix: Water Lab File ID: H1461.D
Analysis Method: 8260B Date Collected: 10/26/2016 10:35
Sample wt/vol: 20 (mL) Date Analyzed: 11/09/2016 14:43
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 350526 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
460-00-4	4-Bromofluorobenzene (Surr)	96		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
2037-26-5	Toluene-d8 (Surr)	93		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1461.D
 Lims ID: 280-90232-F-1
 Client ID: LL5mw-002-102616-GW
 Sample Type: Client
 Inject. Date: 09-Nov-2016 14:43:30 ALS Bottle#: 20 Worklist Smp#: 24
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-90232-F-1 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 19:07:23 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: moanm

Date: 13-Nov-2016 11:52:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.995	3.978	0.017	96	249590	250.0	
* 2 Fluorobenzene	96	6.764	6.765	-0.001	99	1286116	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.084	11.101	-0.017	85	349203	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.097	14.097	0.000	94	585007	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.928	5.929	-0.001	94	648415	10.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.346	6.347	-0.001	96	235082	9.54	
\$ 10 Toluene-d8 (Surr)	98	8.872	8.872	0.000	92	1421848	9.06	
\$ 11 4-Bromofluorobenzene (Surr	95	12.756	12.756	0.000	92	746272	9.35	
30 Chloromethane	50		2.271				ND	
32 Vinyl chloride	62		2.393				ND	
35 Bromomethane	94		2.689				ND	
36 Chloroethane	64		2.759				ND	
45 1,1-Dichloroethene	96		3.473				ND	
47 Acetone	43		3.525				ND	
50 Carbon disulfide	76		3.734				ND	
54 Methylene Chloride	84	3.960	3.961	-0.001	94	32801	0.9252	
58 trans-1,2-Dichloroethene	96		4.239				ND	
60 1,1-Dichloroethane	63		4.692				ND	
67 2-Butanone (MEK)	43		5.371				ND	
65 cis-1,2-Dichloroethene	96		5.371				ND	
73 Chlorobromomethane	128		5.650				ND	
75 Chloroform	83		5.737				ND	
76 1,1,1-Trichloroethane	97		5.981				ND	
79 Carbon tetrachloride	117		6.173				ND	
81 Benzene	78		6.416				ND	
82 1,2-Dichloroethane	62		6.434				ND	
86 Trichloroethene	95		7.235				ND	
90 1,2-Dichloropropane	63		7.531				ND	
94 Dichlorobromomethane	83		7.897				ND	
97 cis-1,3-Dichloropropene	75		8.489				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.715				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
99 Toluene	91		8.959				ND	
100 trans-1,3-Dichloropropene	75		9.273				ND	
102 1,1,2-Trichloroethane	97		9.534				ND	
103 Tetrachloroethene	164		9.743				ND	
105 2-Hexanone	43		9.917				ND	
108 Chlorodibromomethane	129		10.143				ND	
109 Ethylene Dibromide	107		10.335				ND	
111 Chlorobenzene	112		11.136				ND	
113 Ethylbenzene	106		11.310				ND	
114 m-Xylene & p-Xylene	106		11.502				ND	
115 o-Xylene	106		12.059				ND	
116 Styrene	104		12.094				ND	
117 Bromoform	173		12.338				ND	
121 1,1,2,2-Tetrachloroethane	83		12.947				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00006

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00074

Amount Added: 0.78

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1461.D

Injection Date: 09-Nov-2016 14:43:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-90232-F-1

Lab Sample ID: 280-90232-1

Worklist Smp#: 24

Client ID: LL5mw-002-102616-GW

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

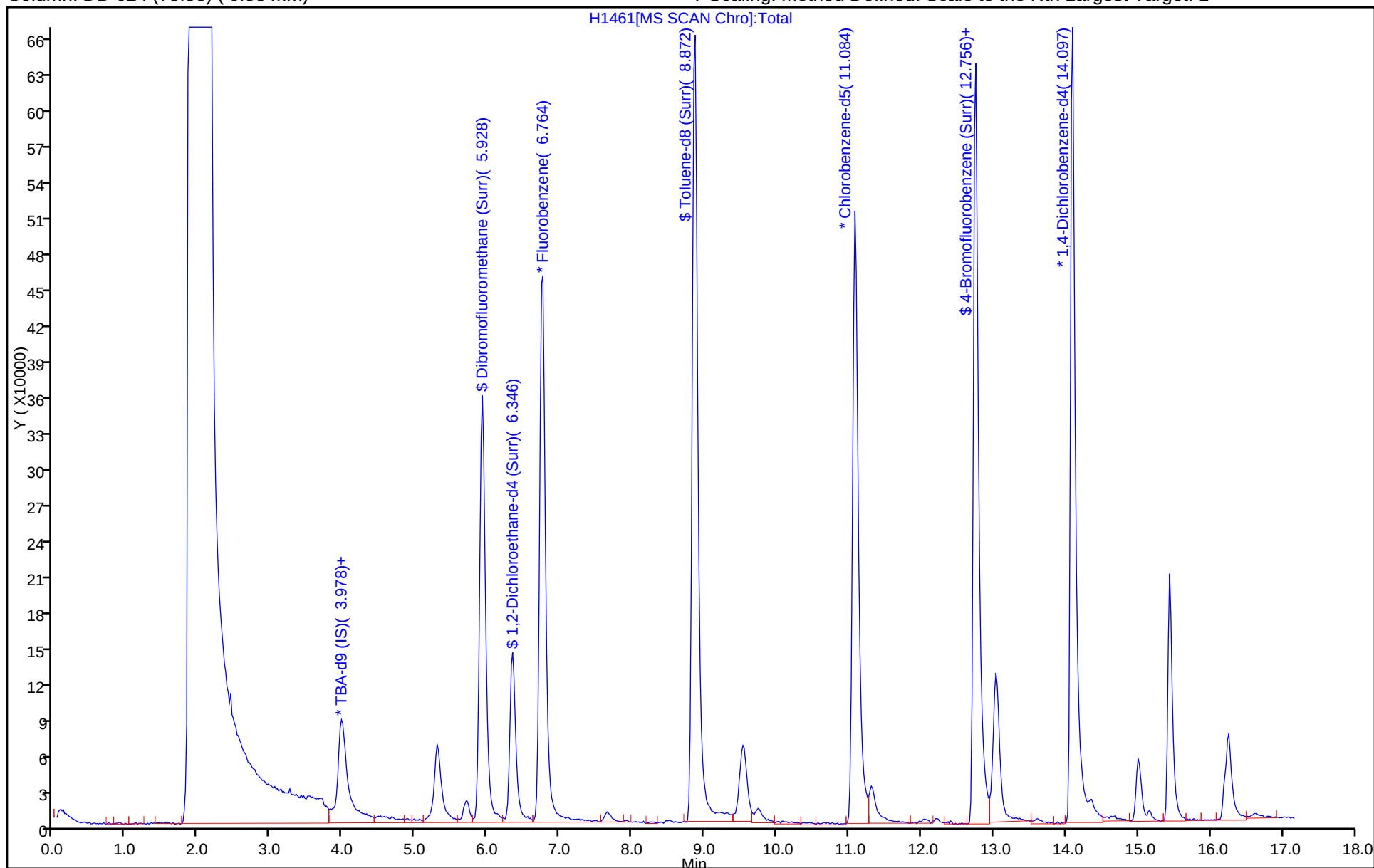
ALS Bottle#: 20

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1461.D
 Lims ID: 280-90232-F-1
 Client ID: LL5mw-002-102616-GW
 Sample Type: Client
 Inject. Date: 09-Nov-2016 14:43:30 ALS Bottle#: 20 Worklist Smp#: 24
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-90232-F-1 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 19:07:23 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: moanm

Date: 13-Nov-2016 11:52:24

Compound	Amount Added	Amount Recovered	% Rec.
\$ 8 Dibromofluoromethane (Surr)	9.75	10.8	110.33
\$ 9 1,2-Dichloroethane-d4 (Surr)	9.75	9.54	97.84
\$ 10 Toluene-d8 (Surr)	9.75	9.06	92.93
\$ 11 4-Bromofluorobenzene (Surr)	9.75	9.35	95.93

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1461.D

Injection Date: 09-Nov-2016 14:43:30

Instrument ID: VMS_H

Lims ID: 280-90232-F-1

Lab Sample ID: 280-90232-1

Client ID: LL5mw-002-102616-GW

Operator ID: moanm

ALS Bottle#: 20

Worklist Smp#: 24

Purge Vol: 20.000 mL

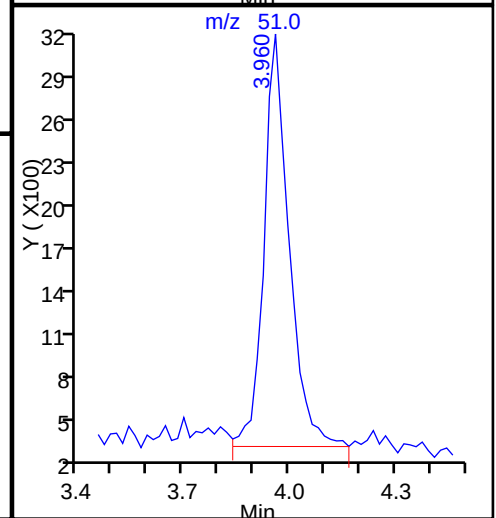
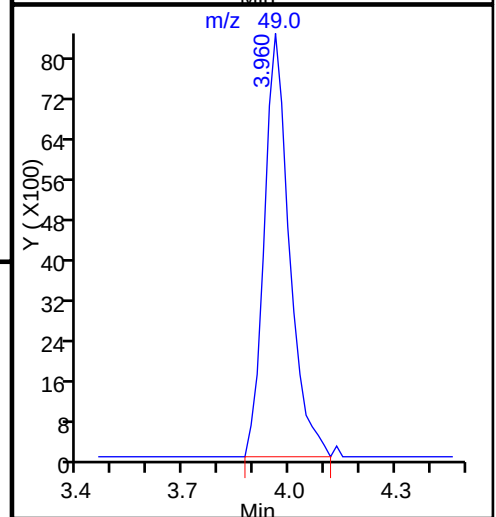
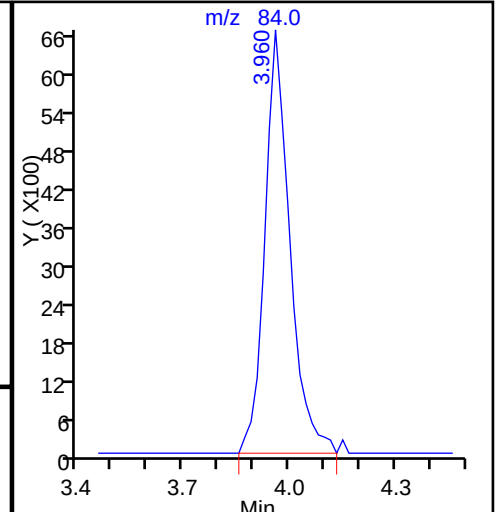
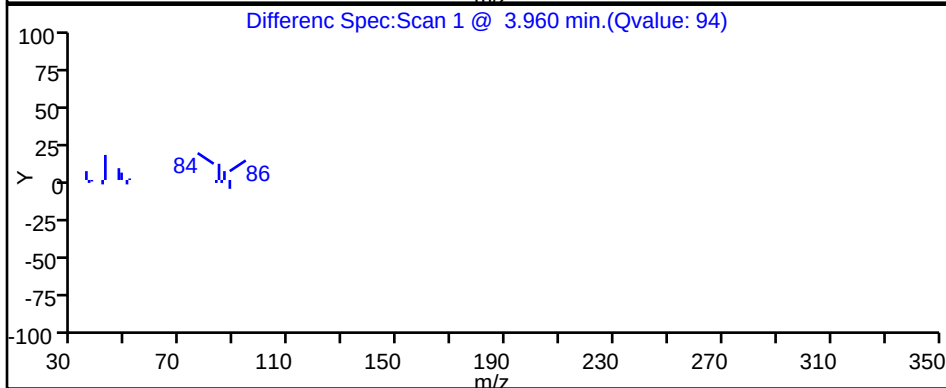
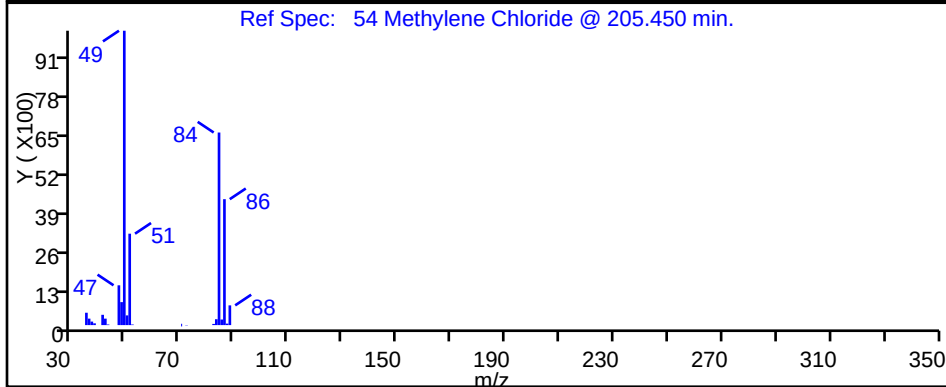
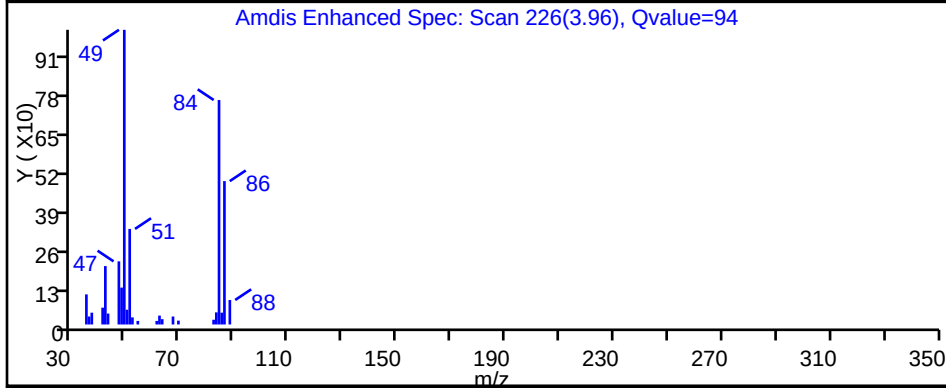
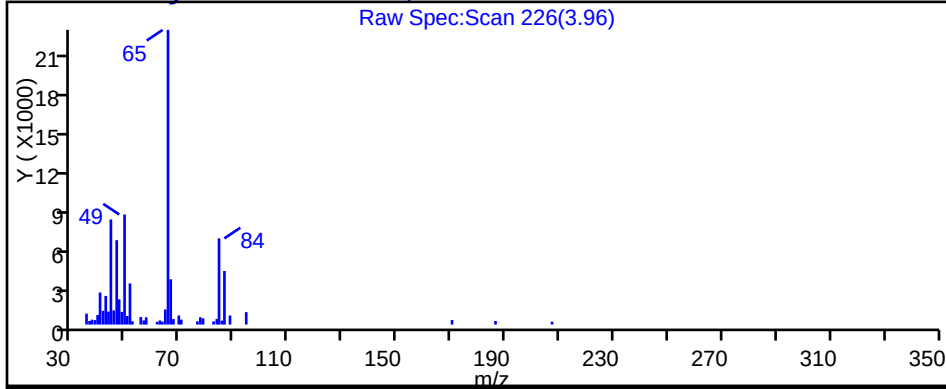
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

54 Methylene Chloride, CAS: 75-09-2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-90232-1</u>
SDG No.: _____	
Client Sample ID: <u>LL5mw-006-102616-GW</u>	Lab Sample ID: <u>280-90232-2</u>
Matrix: <u>Water</u>	Lab File ID: <u>P3864.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/27/2016 15:11</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>11/10/2016 14:43</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (60.25)</u> ID: <u>0.25 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>350742</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U Q	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
106-93-4	1,2-Dibromoethane	0.40	U Q	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
591-78-6	2-Hexanone	4.0	U Q	5.0	4.0	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U Q	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U Q	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U Q	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U Q	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U Q	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.79	J	5.0	0.80	0.32
100-42-5	Styrene	0.40	U Q	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U Q	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Client Sample ID: LL5mw-006-102616-GW Lab Sample ID: 280-90232-2
Matrix: Water Lab File ID: P3864.D
Analysis Method: 8260B Date Collected: 10/27/2016 15:11
Sample wt/vol: 20 (mL) Date Analyzed: 11/10/2016 14:43
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 (60.25) ID: 0.25 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 350742 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		81-118
460-00-4	4-Bromofluorobenzene (Surr)	117	Q	85-114
1868-53-7	Dibromofluoromethane (Surr)	112		80-119
2037-26-5	Toluene-d8 (Surr)	119	Q	89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3864.D
 Lims ID: 280-90232-F-2
 Client ID: LL5mw-006-102616-GW
 Sample Type: Client
 Inject. Date: 10-Nov-2016 14:43:30 ALS Bottle#: 30 Worklist Smp#: 24
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-90232-f-2 PH<2
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 08:49:05 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:42:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.643	5.650	-0.007	92	236823	250.0	
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	2605453	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	88	560378	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.706	0.000	97	786468	12.5	
* 149 1,4-Dioxane-d8	96		0.000				ND	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	92	763599	12.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.373	7.366	0.007	99	659518	12.2	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.803	0.000	95	3166670	13.7	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	86	939218	13.4	
26 Chloromethane	50		4.097				ND	
27 Vinyl chloride	62		4.250				ND	
29 Bromomethane	94		4.613				ND	
30 Chloroethane	64		4.683				ND	
41 Acetone	43		5.368				ND	
43 1,1-Dichloroethene	96		5.409				ND	
48 Carbon disulfide	76		5.700				ND	
50 Methylene Chloride	84	5.757	5.757	0.000	97	100605	0.7857	
53 trans-1,2-Dichloroethene	96		5.964				ND	
57 1,1-Dichloroethane	63		6.293				ND	
61 2-Butanone (MEK)	43		6.687				ND	
63 cis-1,2-Dichloroethene	96		6.729				ND	
67 Chlorobromomethane	128		6.937				ND	
68 Chloroform	83		6.944				ND	
71 1,1,1-Trichloroethane	97		7.151				ND	
74 Carbon tetrachloride	117		7.287				ND	
76 1,2-Dichloroethane	62		7.430				ND	
77 Benzene	78		7.437				ND	
79 Trichloroethene	95		7.902				ND	
83 1,2-Dichloropropane	63		8.095				ND	
86 Dichlorobromomethane	83		8.274				ND	
89 cis-1,3-Dichloropropene	75		8.588				ND	
90 4-Methyl-2-pentanone (MIBK	43		8.646				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
91 Toluene	91		8.860				ND	
93 trans-1,3-Dichloropropene	75		8.967				ND	
94 1,1,2-Trichloroethane	97		9.125				ND	
95 2-Hexanone	43		9.232				ND	
97 Tetrachloroethene	164		9.268				ND	
98 Chlorodibromomethane	129		9.446				ND	
100 Ethylene Dibromide	107		9.575				ND	
102 Chlorobenzene	112		9.904				ND	
103 Ethylbenzene	106		9.940				ND	
105 m-Xylene & p-Xylene	106		10.011				ND	
107 o-Xylene	106		10.326				ND	
106 Styrene	104		10.333				ND	
108 Bromoform	173		10.540				ND	
112 1,1,2,2-Tetrachloroethane	83		10.805				ND	
S 138 1,2-Dichloroethene, Total	1		0.000				ND	
S 139 Xylenes, Total	106		0.000				ND	

Reagents:

MV-567649-D_00001

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00074

Amount Added: 0.92

Units: uL

Run Reagent

Report Date: 11-Nov-2016 09:54:06

Chrom Revision: 2.2 01-Nov-2016 11:37:52

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3864.D

Injection Date: 10-Nov-2016 14:43:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: 280-90232-F-2

Lab Sample ID: 280-90232-2

Worklist Smp#: 24

Client ID: LL5mw-006-102616-GW

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

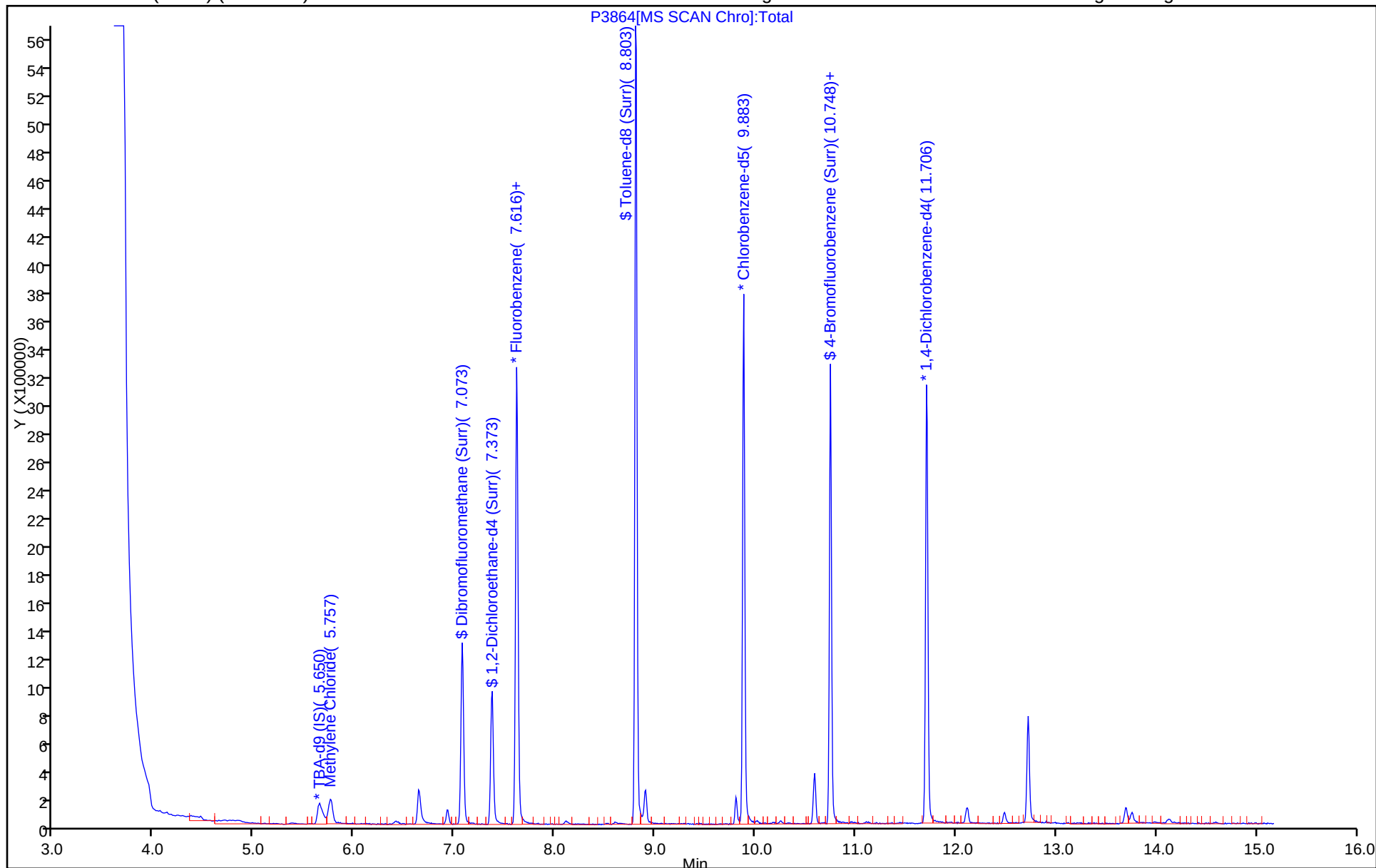
ALS Bottle#: 30

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3864.D
Lims ID: 280-90232-F-2
Client ID: LL5mw-006-102616-GW
Sample Type: Client
Inject. Date: 10-Nov-2016 14:43:30 ALS Bottle#: 30 Worklist Smp#: 24
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-90232-f-2 PH<2
Operator ID: SEIFERTJ Instrument ID: VMS_P
Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Nov-2016 08:49:05 Calib Date: 07-Nov-2016 12:50:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:42:21

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	11.5	12.9	112.04
\$ 6 1,2-Dichloroethane-d4 (Surr)	11.5	12.2	105.83
\$ 7 Toluene-d8 (Surr)	11.5	13.7	119.04
\$ 8 4-Bromofluorobenzene (Surr)	11.5	13.4	116.76

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3864.D

Injection Date: 10-Nov-2016 14:43:30

Instrument ID: VMS_P

Lims ID: 280-90232-F-2

Lab Sample ID: 280-90232-2

Client ID: LL5mw-006-102616-GW

Operator ID: SEIFERTJ

ALS Bottle#: 30

Worklist Smp#: 24

Purge Vol: 20.000 mL

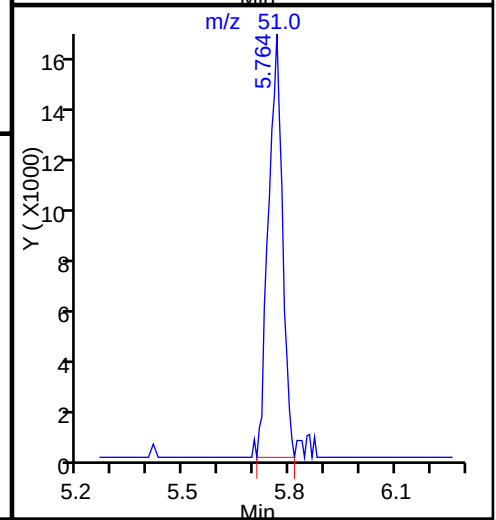
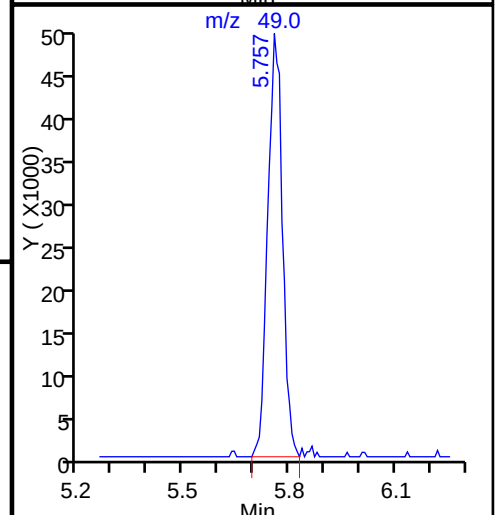
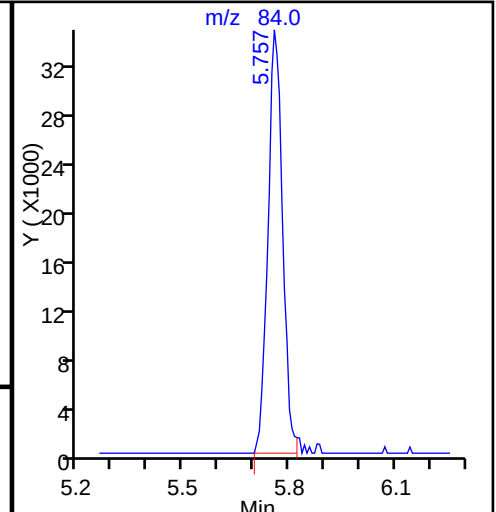
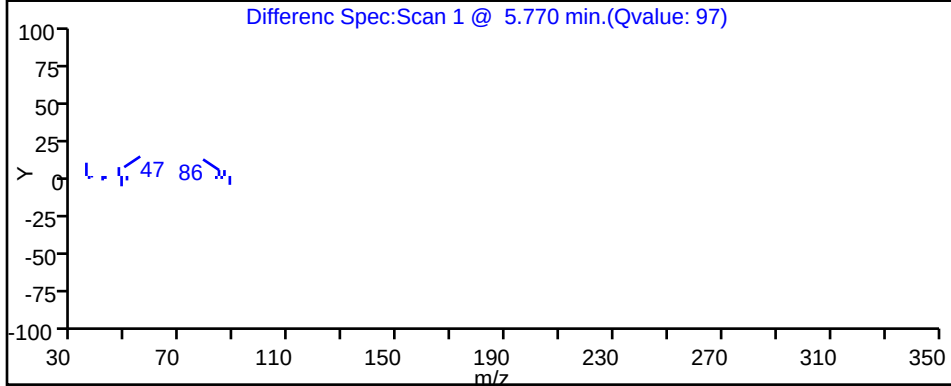
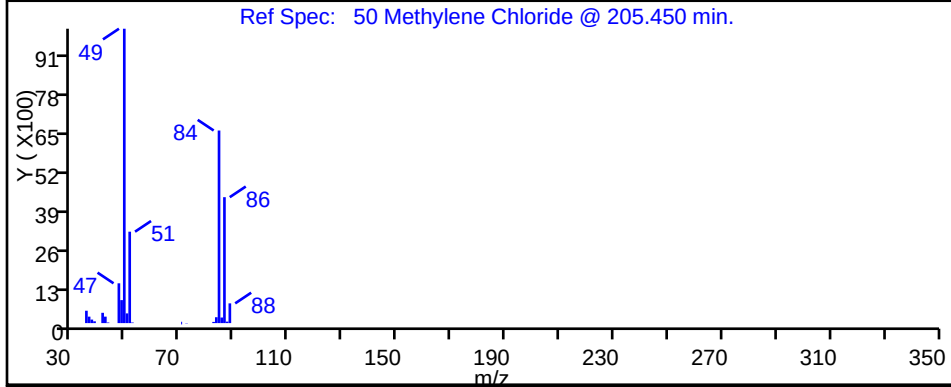
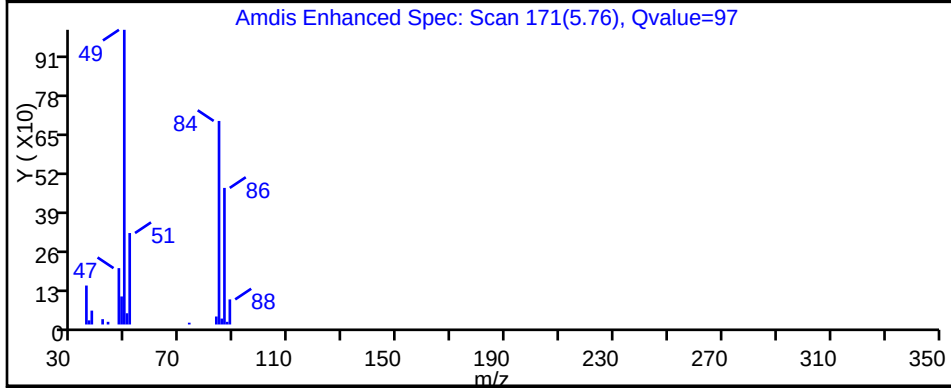
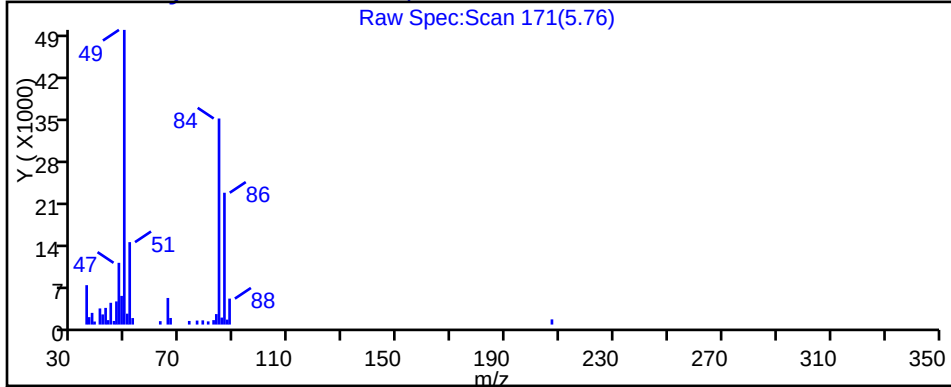
Dil. Factor: 1.0000

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Detector: MS SCAN

50 Methylene Chloride, CAS: 75-09-2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Denver</u>	Job No.: <u>280-90232-1</u>
SDG No.: _____	
Client Sample ID: <u>TRIP BLANK</u>	Lab Sample ID: <u>280-90232-3</u>
Matrix: <u>Water</u>	Lab File ID: <u>H1463.D</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/27/2016 00:00</u>
Sample wt/vol: <u>20 (mL)</u>	Date Analyzed: <u>11/09/2016 15:31</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>DB-624 (75.53)</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>350526</u>	Units: <u>ug/L</u>

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	1.2	J	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Client Sample ID: TRIP BLANK Lab Sample ID: 280-90232-3
Matrix: Water Lab File ID: H1463.D
Analysis Method: 8260B Date Collected: 10/27/2016 00:00
Sample wt/vol: 20 (mL) Date Analyzed: 11/09/2016 15:31
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 350526 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		81-118
460-00-4	4-Bromofluorobenzene (Surr)	95		85-114
1868-53-7	Dibromofluoromethane (Surr)	110		80-119
2037-26-5	Toluene-d8 (Surr)	94		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1463.D
 Lims ID: 280-90232-B-3
 Client ID: TRIP BLANK
 Sample Type: Client
 Inject. Date: 09-Nov-2016 15:31:30 ALS Bottle#: 22 Worklist Smp#: 26
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-90232-B-3 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 19:07:23 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: bergerb

Date: 09-Nov-2016 18:00:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.002	3.978	0.024	96	269726	250.0	
* 2 Fluorobenzene	96	6.771	6.765	0.006	99	1295198	12.5	
* 3 1,4-Dioxane-d8	96		8.670				ND	
* 4 Chlorobenzene-d5	119	11.107	11.101	0.006	85	345380	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.103	14.097	0.006	94	587968	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.935	5.929	0.006	94	649102	10.7	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.353	6.347	0.006	96	232533	9.37	
\$ 10 Toluene-d8 (Surr)	98	8.878	8.872	0.006	92	1422442	9.16	
\$ 11 4-Bromofluorobenzene (Surr	95	12.762	12.756	0.006	91	744294	9.28	
30 Chloromethane	50		2.271				ND	
32 Vinyl chloride	62		2.393				ND	
35 Bromomethane	94		2.689				ND	
36 Chloroethane	64		2.759				ND	
45 1,1-Dichloroethene	96		3.473				ND	
47 Acetone	43		3.525				ND	
50 Carbon disulfide	76		3.734				ND	
54 Methylene Chloride	84	3.967	3.961	0.006	95	44051	1.23	
58 trans-1,2-Dichloroethene	96		4.239				ND	
60 1,1-Dichloroethane	63		4.692				ND	
67 2-Butanone (MEK)	43		5.371				ND	
65 cis-1,2-Dichloroethene	96		5.371				ND	
73 Chlorobromomethane	128		5.650				ND	
75 Chloroform	83		5.737				ND	
76 1,1,1-Trichloroethane	97		5.981				ND	
79 Carbon tetrachloride	117		6.173				ND	
81 Benzene	78		6.416				ND	
82 1,2-Dichloroethane	62		6.434				ND	
86 Trichloroethene	95		7.235				ND	
90 1,2-Dichloropropane	63		7.531				ND	
94 Dichlorobromomethane	83		7.897				ND	
97 cis-1,3-Dichloropropene	75		8.489				ND	
98 4-Methyl-2-pentanone (MIBK	43		8.715				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
99 Toluene	91		8.959				ND	
100 trans-1,3-Dichloropropene	75		9.273				ND	
102 1,1,2-Trichloroethane	97		9.534				ND	
103 Tetrachloroethene	164		9.743				ND	
105 2-Hexanone	43		9.917				ND	
108 Chlorodibromomethane	129		10.143				ND	
109 Ethylene Dibromide	107		10.335				ND	
111 Chlorobenzene	112		11.136				ND	
113 Ethylbenzene	106		11.310				ND	
114 m-Xylene & p-Xylene	106		11.502				ND	
115 o-Xylene	106		12.059				ND	
116 Styrene	104		12.094				ND	
117 Bromoform	173		12.338				ND	
121 1,1,2,2-Tetrachloroethane	83		12.947				ND	
S 149 1,2-Dichloroethene, Total	1		0.000				ND	
S 150 Xylenes, Total	106		0.000				ND	

Reagents:

MV-568718-D_00006

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00074

Amount Added: 0.78

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1463.D

Injection Date: 09-Nov-2016 15:31:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: 280-90232-B-3

Lab Sample ID: 280-90232-3

Worklist Smp#: 26

Client ID: TRIP BLANK

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

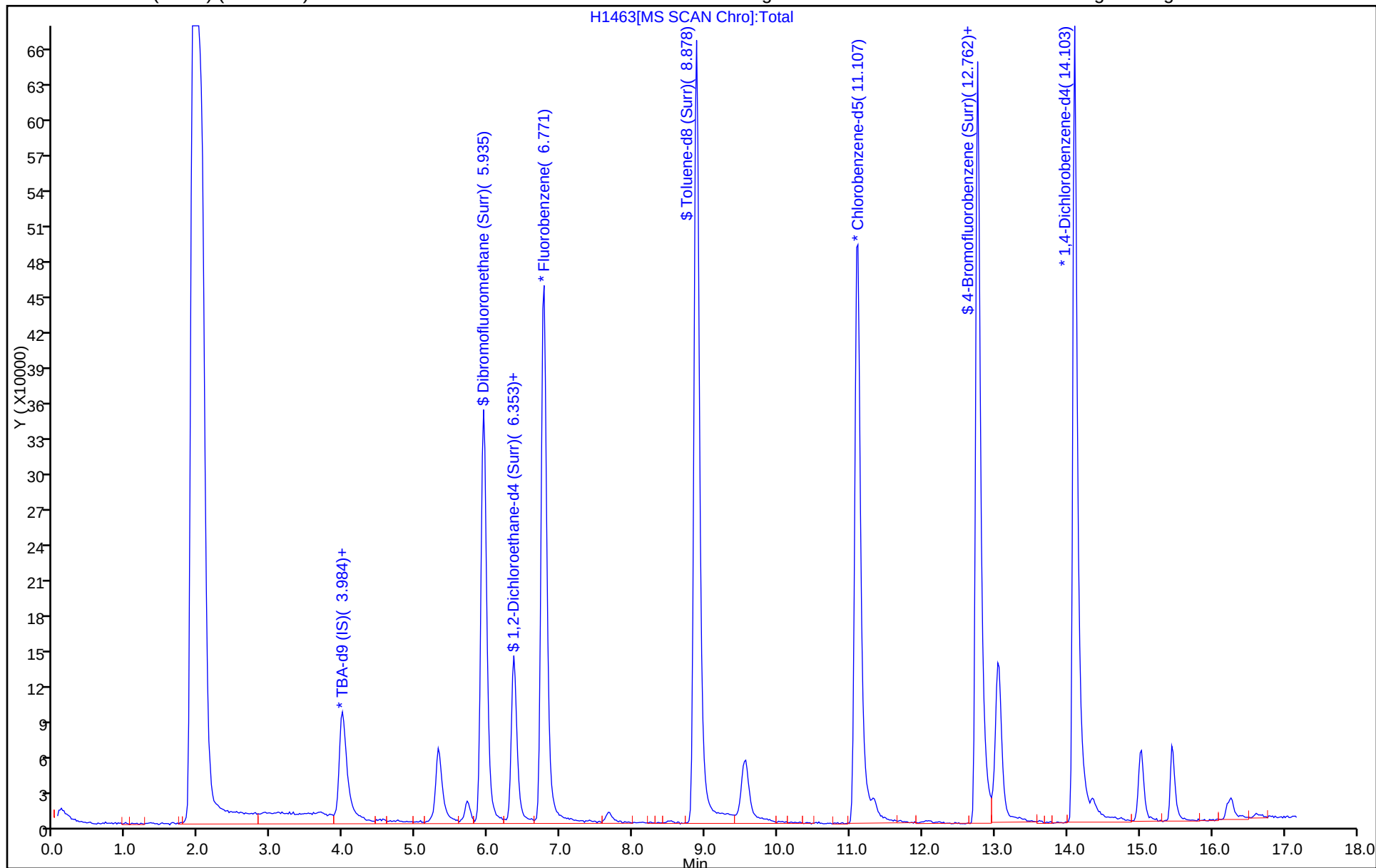
ALS Bottle#: 22

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1463.D
 Lims ID: 280-90232-B-3
 Client ID: TRIP BLANK
 Sample Type: Client
 Inject. Date: 09-Nov-2016 15:31:30 ALS Bottle#: 22 Worklist Smp#: 26
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: 280-90232-B-3 ph<2
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 19:07:23 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: bergerb

Date: 09-Nov-2016 18:00:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 8 Dibromofluoromethane (Surr)	9.75	10.7	109.67
\$ 9 1,2-Dichloroethane-d4 (Surr)	9.75	9.37	96.10
\$ 10 Toluene-d8 (Surr)	9.75	9.16	93.99
\$ 11 4-Bromofluorobenzene (Surr)	9.75	9.28	95.19

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1463.D

Injection Date: 09-Nov-2016 15:31:30

Instrument ID: VMS_H

Lims ID: 280-90232-B-3

Lab Sample ID: 280-90232-3

Client ID: TRIP BLANK

Operator ID: moanm

ALS Bottle#: 22

Worklist Smp#: 26

Purge Vol: 20.000 mL

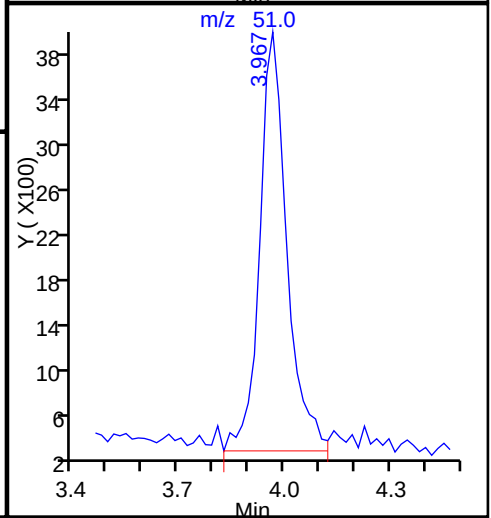
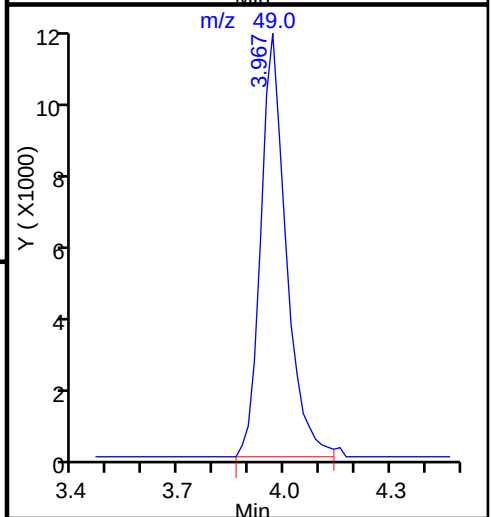
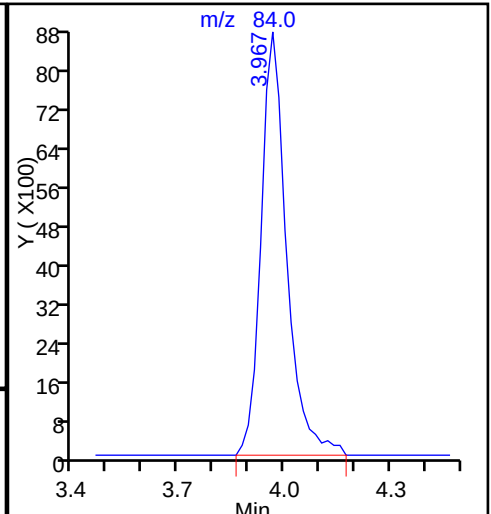
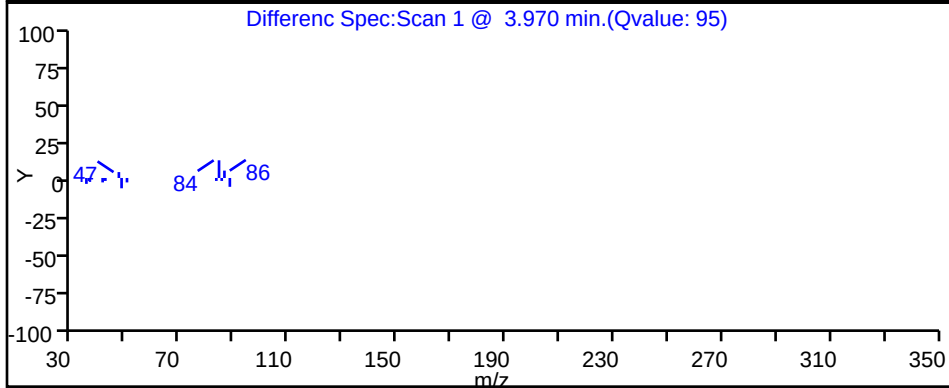
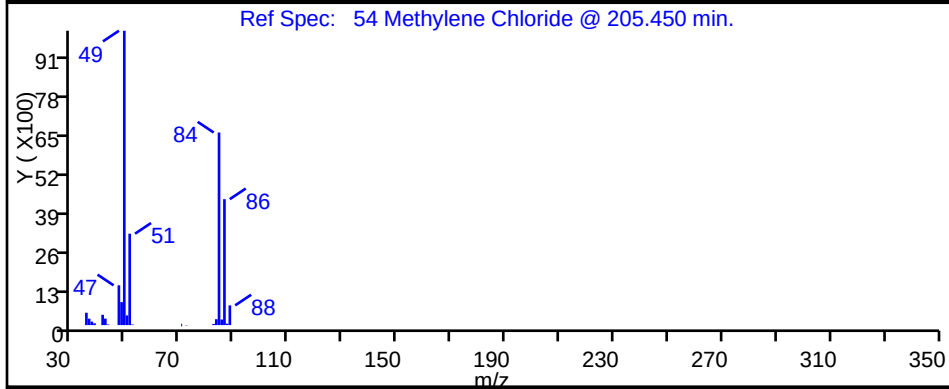
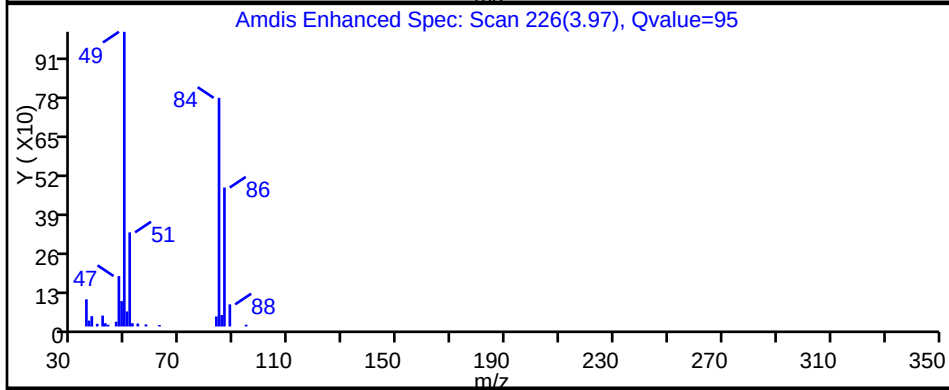
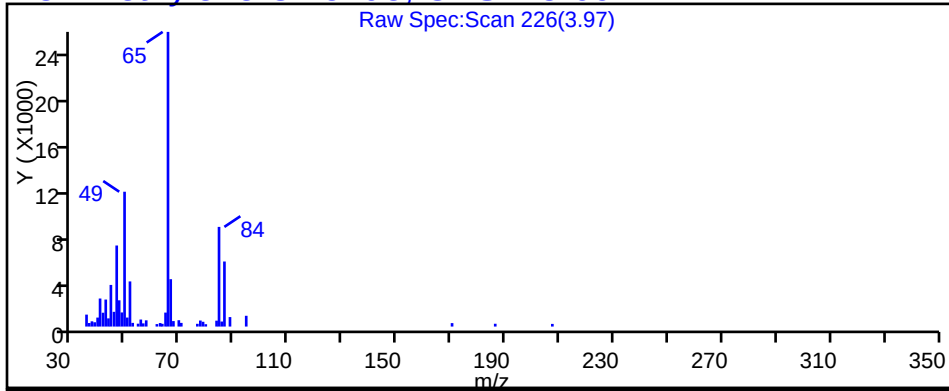
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

54 Methylene Chloride, CAS: 75-09-2

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 345574

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 01:33 Calibration End Date: 10/08/2016 03:30 Calibration ID: 27260

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-345574/24	H9967.D
Level 2	IC 280-345574/25	H9968.D
Level 3	IC 280-345574/26	H9969.D
Level 4	ICIS 280-345574/27	H9970.D
Level 5	IC 280-345574/28	H9971.D
Level 6	IC 280-345574/29	H9972.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	++++ 0.0008	0.0009	0.0009	0.0007	0.0007	Ave		0.0008				11.4		15.0			
Acetonitrile	++++ 0.0076	0.0035	0.0051	0.0080	0.0074	Lin1	-0.086	0.0078							0.9960		0.9900
Isopropyl ether	++++ 0.2974	0.2767	0.2899	0.2809	0.2752	Ave		0.2840				3.3		15.0			
2-Chloro-1,3-butadiene	0.4748 0.5663	0.5070	0.5060	0.4974	0.5070	Ave		0.5098				6.0		15.0			
Tert-butyl ethyl ether	0.8220 0.9762	0.9159	0.9208	0.8980	0.8962	Ave		0.9049				5.5		15.0			
Ethyl acetate	0.1280 0.1448	0.1344	0.1438	0.1413	0.1442	Ave		0.1394				4.9		15.0			
Propionitrile	++++ 0.0103	0.0080	0.0098	0.0089	0.0091	Ave		0.0092				9.4		15.0			
Methacrylonitrile	0.0667 0.0739	0.0641	0.0722	0.0686	0.0695	Ave		0.0692				5.2		15.0			
Tert-amyl methyl ether	0.6216 0.7984	0.6296	0.7168	0.7016	0.7468	Ave		0.7025				9.7		15.0			
n-Butanol	++++ 0.0028	0.0018	0.0024	0.0022	0.0026	Lin2	-0.045	0.0027							0.9950		0.9900
Methyl methacrylate	0.0632 0.0588	0.0582	0.0631	0.0582	0.0567	Ave		0.0597				4.6		15.0			
2-Nitropropane	0.0273 0.0262	0.0220	0.0286	0.0266	0.0258	Ave		0.0261				8.6		15.0			
cis-1,4-Dichloro-2-butene	0.1325 0.1495	0.1432	0.1477	0.1399	0.1422	Ave		0.1425				4.2		15.0			
1,2,3-Trimethylbenzene	2.7411 2.9338	2.8703	2.8180	2.7721	2.6996	Ave		2.8058				3.1		15.0			
Dibromofluoromethane (Surr)	0.6200 0.6173	0.6017	0.6119	0.5911	0.5683	Ave		0.6017				3.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 345574

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 01:33 Calibration End Date: 10/08/2016 03:30 Calibration ID: 27260

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichloroethane-d4 (Surr)	0.2200 0.2343	0.2071	0.2326	0.2229	0.2159	Ave		0.2221				4.6		15.0			
Toluene-d8 (Surr)	4.6654 4.7525	4.6044	4.6258	4.6152	4.3504	Ave		4.6023				2.9		15.0			
4-Bromofluorobenzene (Surr)	1.5231 1.5869	1.5629	1.5566	1.5118	1.4515	Ave		1.5321				3.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 345574

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 01:33 Calibration End Date: 10/08/2016 03:30 Calibration ID: 27260

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-345574/24	H9967.D
Level 2	IC 280-345574/25	H9968.D
Level 3	IC 280-345574/26	H9969.D
Level 4	ICIS 280-345574/27	H9970.D
Level 5	IC 280-345574/28	H9971.D
Level 6	IC 280-345574/29	H9972.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethanol	FB	Ave	+++++ 224233	8946	22220	37459	117303	+++++ 2400	80.0	200	400	1200
Acetonitrile	FB	Lin1	+++++ 557785	8455	31870	100802	295895	+++++ 600	20.0	50.0	100	300
Isopropyl ether	FB	Ave	+++++ 2177962	66348	179684	352737	1099279	+++++ 60.0	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	55267 4146952	121544	313666	624622	2024886	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	95680 7148454	219588	570788	1127693	3579641	1.00 60.0	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Ave	29795 2120014	64436	178256	354827	1152125	2.00 120	4.00	10.0	20.0	60.0
Propionitrile	FB	Ave	+++++ 753465	19246	60655	111577	363449	+++++ 600	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	77654 5409097	153666	447763	861592	2775230	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	72358 5846535	150937	444343	881034	2982655	1.00 60.0	2.00	5.00	10.0	30.0
n-Butanol	FB	Lin2	+++++ 518206	10849	36566	70580	260884	+++++ 1500	50.0	125	250	750
Methyl methacrylate	FB	Ave	14720 861494	27908	78275	146116	453320	2.00 120	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Ave	6357 383812	10543	35461	66916	205786	2.00 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Ave	13382 947178	28917	79793	151796	489315	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	138409 9291433	289884	761383	1503849	4645453	1.00 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	72169 4520484	144260	379314	742250	2269928	1.00 60.0	2.00	5.00	10.0	30.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	25605 1715985	49651	144203	279909	862204	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 345574

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 01:33 Calibration End Date: 10/08/2016 03:30 Calibration ID: 27260

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toluene-d8 (Surr)	CBNZ d5	Ave	149505 9755135	299269	795126	1570554	4784336	1.00 60.0	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	76908 5025796	157839	420570	820165	2497833	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9967.D
 Lims ID: IC
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 08-Oct-2016 01:33:30 ALS Bottle#: 12 Worklist Smp#: 24
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: IC
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:14 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:13:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.998	3.996	0.002	95	234508	250.0	250.0	
* 2 Fluorobenzene	96	6.785	6.782	0.003	99	1455010	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.121	11.136	-0.015	89	400566	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.134	14.132	0.002	95	631182	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.949	5.935	0.014	94	72169	1.00	1.03	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.367	6.353	0.014	95	25605	1.00	0.99	
\$ 10 Toluene-d8 (Surr)	98	8.892	8.896	-0.004	92	149505	1.00	1.01	
\$ 11 4-Bromofluorobenzene (Surr	95	12.793	12.780	0.013	91	76908	1.00	0.99	
34 Ethylene oxide	43	2.657	2.644	0.013	99	61284	100.0	103.2	
39 Ethanol	45		3.166				ND	ND	
43 Propene oxide	58	3.319	3.306	0.013	95	161320	100.0	126.8	
49 Isopropyl alcohol	45		3.515				ND	ND	
51 Acetonitrile	41		3.828				ND	ND	
62 Isopropyl ether	87		4.751				ND	ND	
63 2-Chloro-1,3-butadiene	53	4.817	4.803	0.014	89	55267	1.00	0.9314	
64 Tert-butyl ethyl ether	59	5.183	5.169	0.014	98	95680	1.00	0.9084	
69 Ethyl acetate	43	5.444	5.430	0.014	98	29795	2.00	1.84	
70 Propionitrile	54		5.483				ND	ND	
72 Methacrylonitrile	41	5.653	5.639	0.014	94	77654	10.0	9.64	
83 Tert-amyl methyl ether	73	6.558	6.562	-0.004	98	72358	1.00	0.8849	
85 n-Butanol	56		7.172				ND	ND	
91 Methyl methacrylate	100	7.691	7.677	0.013	94	14720	2.00	2.12	
95 2-Nitropropane	41	8.248	8.217	0.031	94	6357	2.00	2.09	
107 Tetrahydrothiophene	60		10.150				ND	ND	
119 cis-1,4-Dichloro-2-butene	53	12.671	12.675	-0.004	88	13382	2.00	1.86	
135 1,2,3-Trimethylbenzene	105	14.204	14.191	0.014	97	138409	1.00	0.9769	
140 1,3,5-Trichlorobenzene	180	15.528	15.514	0.014	96	79906	1.00	1.00	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Supp A_00021	Amount Added: 0.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.08	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9967.D

Injection Date: 08-Oct-2016 01:33:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: IC

Worklist Smp#: 24

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

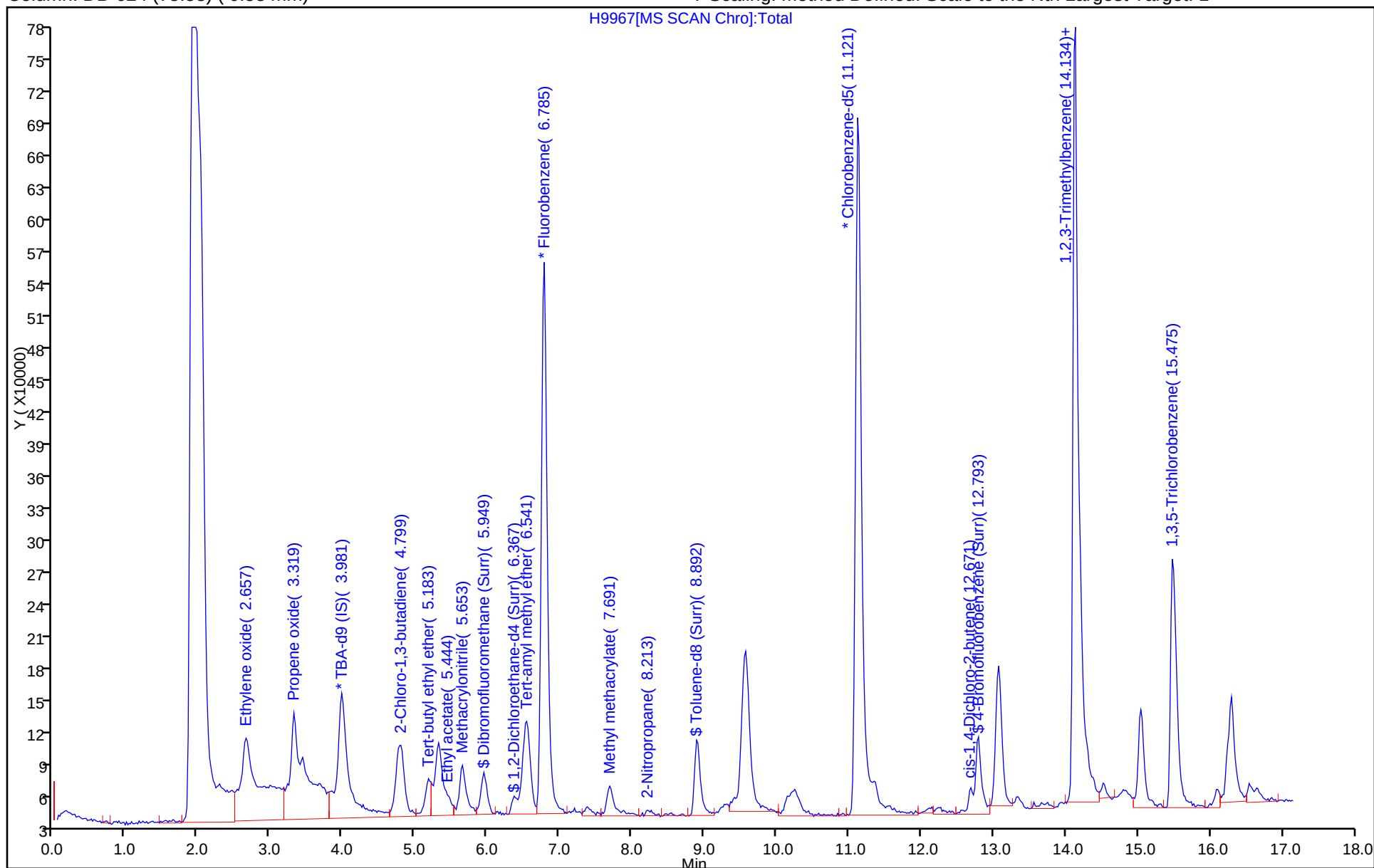
ALS Bottle#: 12

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9968.D
 Lims ID: IC
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 08-Oct-2016 01:56:30 ALS Bottle#: 13 Worklist Smp#: 25
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: IC
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:15 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:14:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.985	3.996	-0.011	95	235719	250.0	250.0	
* 2 Fluorobenzene	96	6.771	6.782	-0.011	99	1498399	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.125	11.136	-0.011	86	406228	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.121	14.132	-0.011	96	631211	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.935	5.935	0.000	94	144260	2.00	2.00	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.371	6.353	0.018	97	49651	2.00	1.86	
\$ 10 Toluene-d8 (Surr)	98	8.896	8.896	0.000	92	299269	2.00	2.00	
\$ 11 4-Bromofluorobenzene (Surr	95	12.780	12.780	0.000	91	157839	2.00	2.04	
34 Ethylene oxide	43	2.644	2.644	0.000	98	111251	200.0	181.9	
39 Ethanol	45	3.131	3.166	-0.035	53	8946	80.0	91.6	
43 Propene oxide	58	3.306	3.306	0.000	96	367945	200.0	194.2	
49 Isopropyl alcohol	45		3.515				ND	ND	
51 Acetonitrile	41	3.828	3.828	0.000	90	8455	20.0	20.1	
62 Isopropyl ether	87	4.751	4.751	0.000	98	66348	2.00	1.95	
63 2-Chloro-1,3-butadiene	53	4.803	4.803	0.000	88	121544	2.00	1.99	
64 Tert-butyl ethyl ether	59	5.169	5.169	0.000	98	219588	2.00	2.02	
69 Ethyl acetate	43	5.448	5.430	0.018	97	64436	4.00	3.86	
70 Propionitrile	54	5.483	5.483	0.000	91	19246	20.0	17.4	
72 Methacrylonitrile	41	5.639	5.639	0.000	93	153666	20.0	18.5	
83 Tert-amyl methyl ether	73	6.562	6.562	0.000	98	150937	2.00	1.79	
85 n-Butanol	56	7.189	7.172	0.017	83	10849	50.0	50.5	
91 Methyl methacrylate	100	7.694	7.677	0.017	94	27908	4.00	3.90	
95 2-Nitropropane	41	8.217	8.217	0.000	93	10543	4.00	3.37	
107 Tetrahydrothiophene	60	10.150	10.150	0.000	45	4260	4.00	4.07	
119 cis-1,4-Dichloro-2-butene	53	12.675	12.675	0.000	93	28917	4.00	4.02	
135 1,2,3-Trimethylbenzene	105	14.208	14.191	0.018	97	289884	2.00	2.05	
140 1,3,5-Trichlorobenzene	180	15.514	15.514	0.000	97	167956	2.00	2.10	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Supp A_00021	Amount Added: 1.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.16	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9968.D

Injection Date: 08-Oct-2016 01:56:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: IC

Worklist Smp#: 25

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

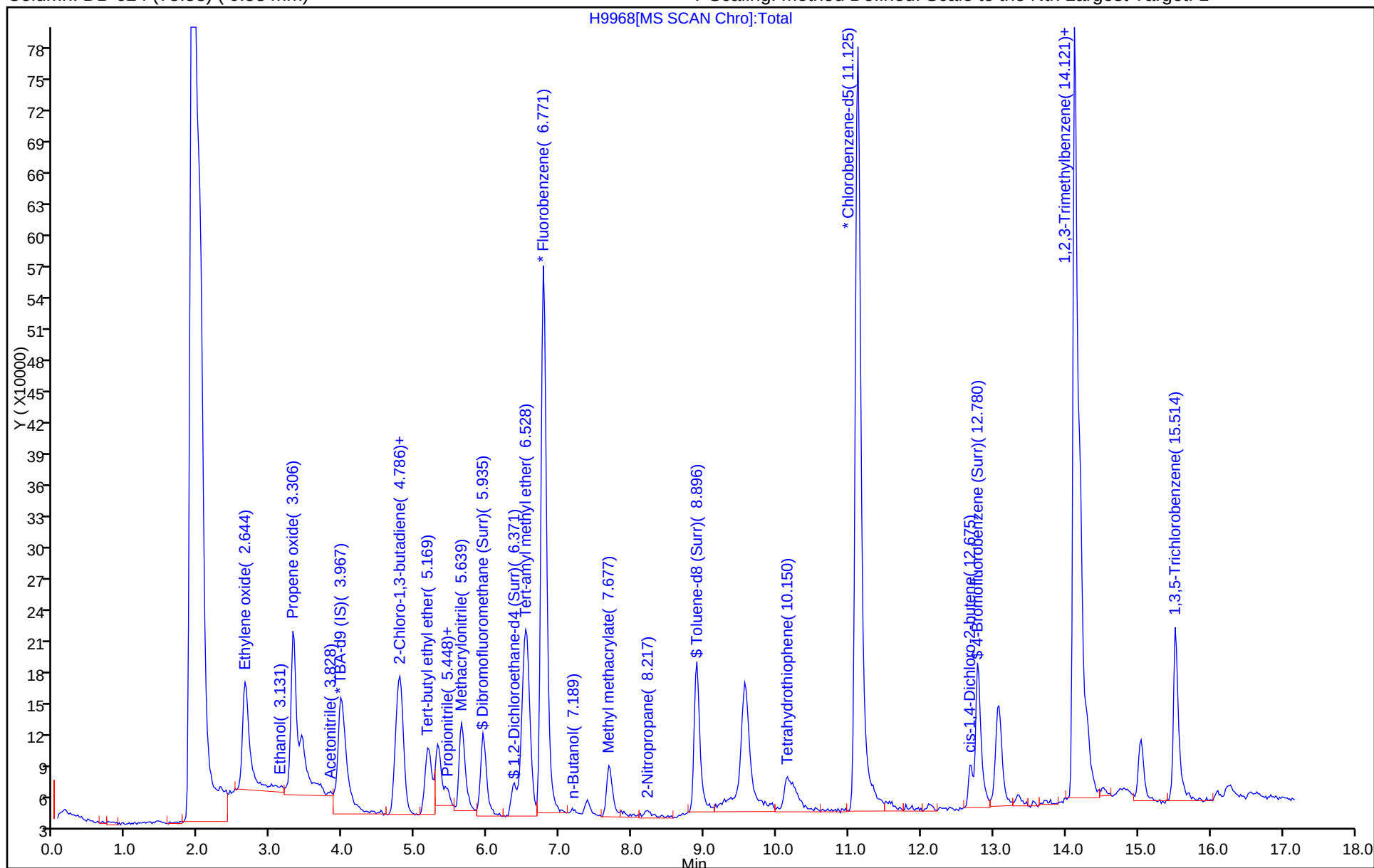
ALS Bottle#: 13

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9969.D
 Lims ID: IC
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 08-Oct-2016 02:19:30 ALS Bottle#: 14 Worklist Smp#: 26
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: IC
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:16 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:14:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.001	3.996	0.005	96	275487	250.0	250.0	
* 2 Fluorobenzene	96	6.788	6.782	0.006	99	1549652	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.124	11.136	-0.012	87	429723	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.120	14.132	-0.012	95	675475	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.952	5.935	0.017	94	379314	5.00	5.08	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.370	6.353	0.017	97	144203	5.00	5.24	
\$ 10 Toluene-d8 (Surr)	98	8.895	8.896	-0.001	92	795126	5.00	5.03	
\$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.780	-0.001	90	420570	5.00	5.08	
34 Ethylene oxide	43	2.660	2.644	0.016	98	311054	500.0	491.7	
39 Ethanol	45	3.183	3.166	0.017	96	22220	200.0	219.9	
43 Propene oxide	58	3.322	3.306	0.016	96	1151992	500.0	443.2	
49 Isopropyl alcohol	45		3.515				ND	ND	
51 Acetonitrile	41	3.845	3.828	0.016	97	31870	50.0	44.0	
62 Isopropyl ether	87	4.768	4.751	0.017	98	179684	5.00	5.10	
63 2-Chloro-1,3-butadiene	53	4.820	4.803	0.017	88	313666	5.00	4.96	
64 Tert-butyl ethyl ether	59	5.186	5.169	0.017	99	570788	5.00	5.09	
69 Ethyl acetate	43	5.447	5.430	0.017	99	178256	10.0	10.3	
70 Propionitrile	54	5.499	5.483	0.016	96	60655	50.0	53.1	
72 Methacrylonitrile	41	5.638	5.639	-0.001	93	447763	50.0	52.2	
83 Tert-amyl methyl ether	73	6.561	6.562	-0.001	98	444343	5.00	5.10	
85 n-Butanol	56	7.171	7.172	-0.001	85	36566	125.0	126.9	
91 Methyl methacrylate	100	7.693	7.677	0.016	95	78275	10.0	10.6	
95 2-Nitropropane	41	8.216	8.217	-0.001	98	35461	10.0	11.0	
107 Tetrahydrothiophene	60	10.166	10.150	0.016	49	11308	10.0	10.2	
119 cis-1,4-Dichloro-2-butene	53	12.674	12.675	-0.001	94	79793	10.0	10.4	
135 1,2,3-Trimethylbenzene	105	14.207	14.191	0.017	97	761383	5.00	5.02	
140 1,3,5-Trichlorobenzene	180	15.531	15.514	0.017	97	430696	5.00	5.02	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Supp A_00021	Amount Added: 2.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.40	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9969.D

Injection Date: 08-Oct-2016 02:19:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: IC

Worklist Smp#: 26

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

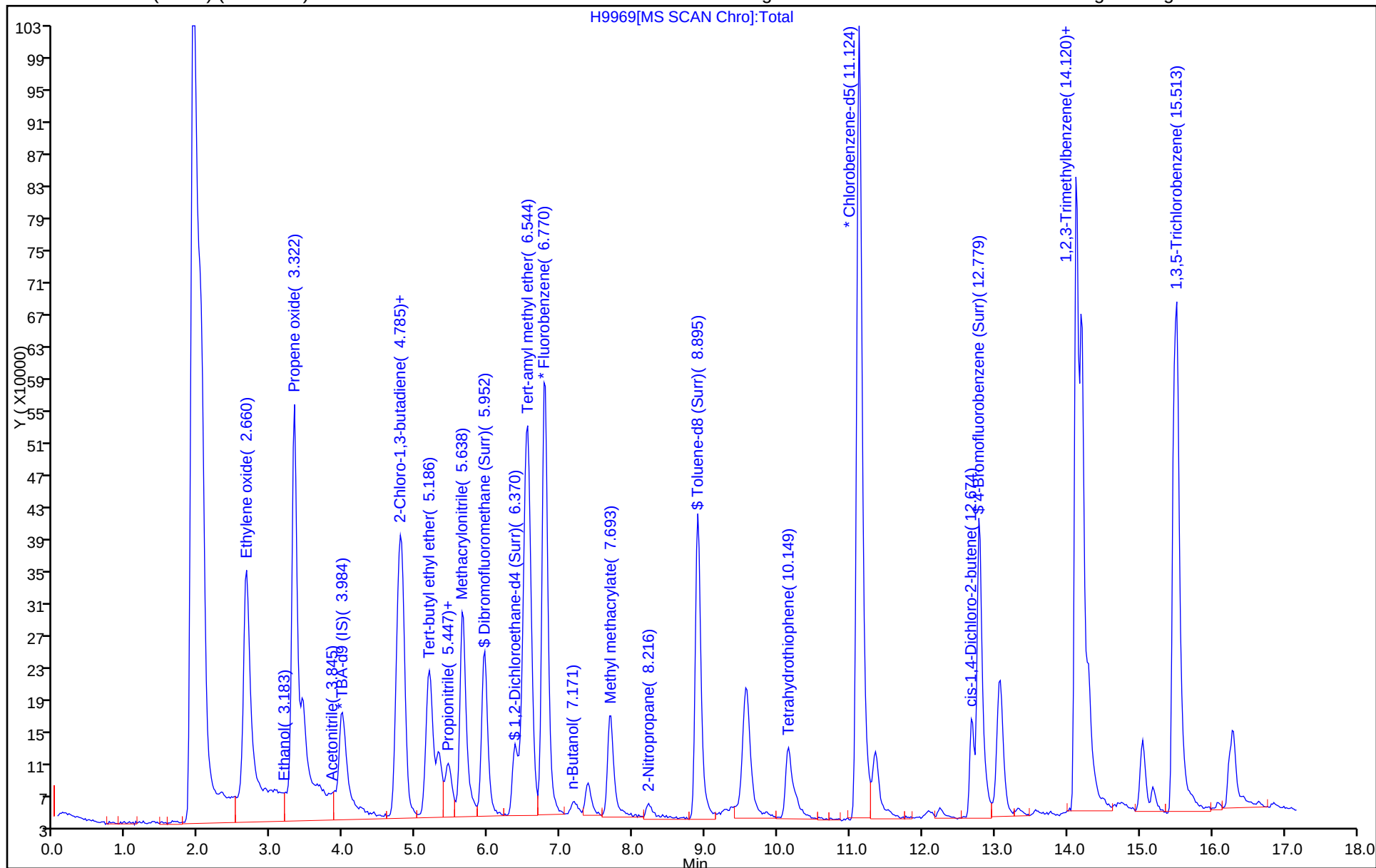
ALS Bottle#: 14

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9970.D
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 5
 Inject. Date: 08-Oct-2016 02:43:30 ALS Bottle#: 15 Worklist Smp#: 27
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICIS
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:18 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:14:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.985	3.985	0.000	95	250628	250.0	250.0	
* 2 Fluorobenzene	96	6.771	6.771	0.000	99	1569695	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.125	11.125	0.000	86	425379	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.121	14.121	0.000	95	678120	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.935	5.935	0.000	94	742250	10.0	9.82	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.353	6.353	0.000	95	279909	10.0	10.0	
\$ 10 Toluene-d8 (Surr)	98	8.896	8.896	0.000	92	1570554	10.0	10.0	
\$ 11 4-Bromofluorobenzene (Surr	95	12.780	12.780	0.000	90	820165	10.0	9.87	
34 Ethylene oxide	43	2.644	2.644	0.000	98	640004	1000.0	998.9	
39 Ethanol	45	3.166	3.166	0.000	90	37459	400.0	366.0	M
43 Propene oxide	58	3.306	3.306	0.000	96	2412600	1000.0	840.2	
49 Isopropyl alcohol	45		3.515				ND	ND	
51 Acetonitrile	41	3.828	3.828	0.000	99	100802	100.0	113.8	
62 Isopropyl ether	87	4.751	4.751	0.000	98	352737	10.0	9.89	
63 2-Chloro-1,3-butadiene	53	4.803	4.803	0.000	88	624622	10.0	9.76	
64 Tert-butyl ethyl ether	59	5.169	5.169	0.000	99	1127693	10.0	9.92	
69 Ethyl acetate	43	5.430	5.430	0.000	99	354827	20.0	20.3	
70 Propionitrile	54	5.483	5.483	0.000	90	111577	100.0	96.4	
72 Methacrylonitrile	41	5.639	5.639	0.000	93	861592	100.0	99.2	
83 Tert-amyl methyl ether	73	6.562	6.562	0.000	98	881034	10.0	9.99	
85 n-Butanol	56	7.172	7.172	0.000	87	70580	250.0	226.7	
91 Methyl methacrylate	100	7.677	7.677	0.000	96	146116	20.0	19.5	
95 2-Nitropropane	41	8.217	8.217	0.000	97	66916	20.0	20.4	
107 Tetrahydrothiophene	60	10.150	10.150	0.000	44	21917	20.0	20.0	
119 cis-1,4-Dichloro-2-butene	53	12.675	12.675	0.000	91	151796	20.0	19.6	
135 1,2,3-Trimethylbenzene	105	14.191	14.191	0.000	98	1503849	10.0	9.88	
140 1,3,5-Trichlorobenzene	180	15.514	15.514	0.000	97	838234	10.0	9.74	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Supp A_00021	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9970.D

Injection Date: 08-Oct-2016 02:43:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: ICIS

Worklist Smp#: 27

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

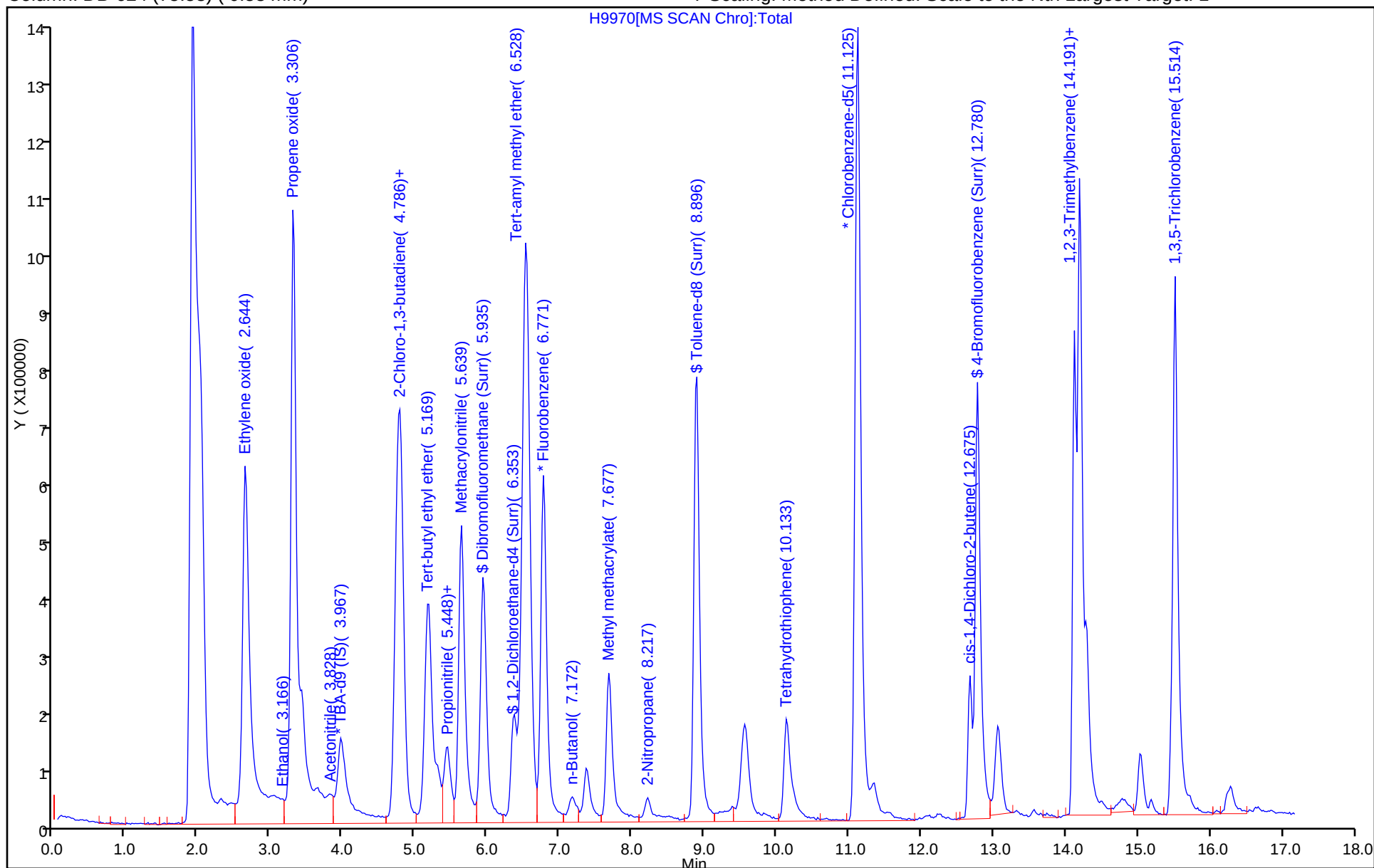
ALS Bottle#: 15

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

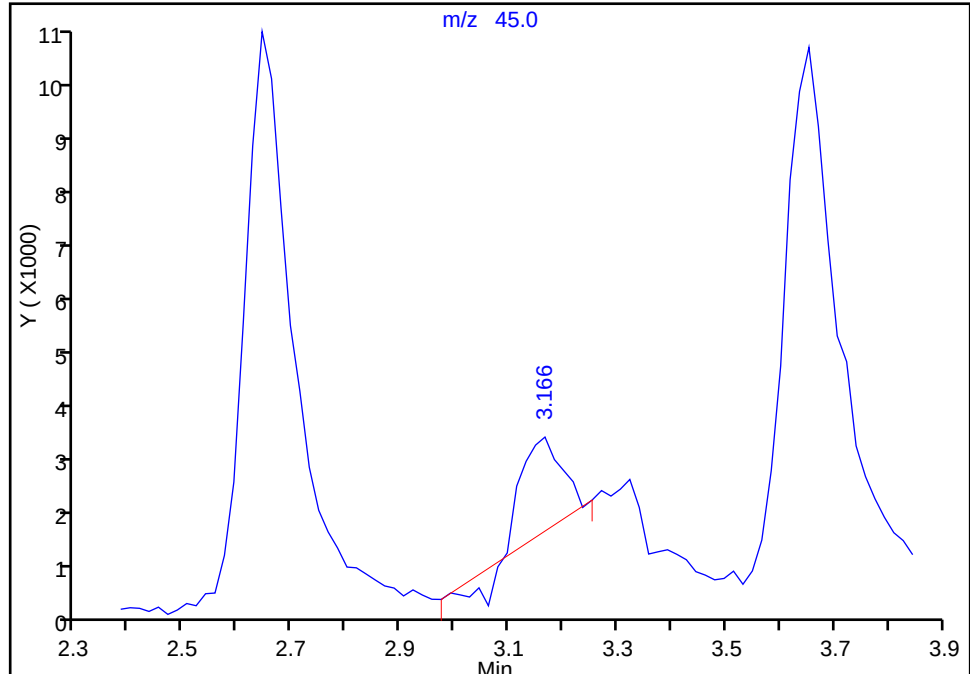
Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9970.D
Injection Date: 08-Oct-2016 02:43:30 Instrument ID: VMS_H
Lims ID: ICIS
Client ID:
Operator ID: bergerb ALS Bottle#: 15 Worklist Smp#: 27
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector: MS SCAN

39 Ethanol, CAS: 64-17-5

Signal: 1

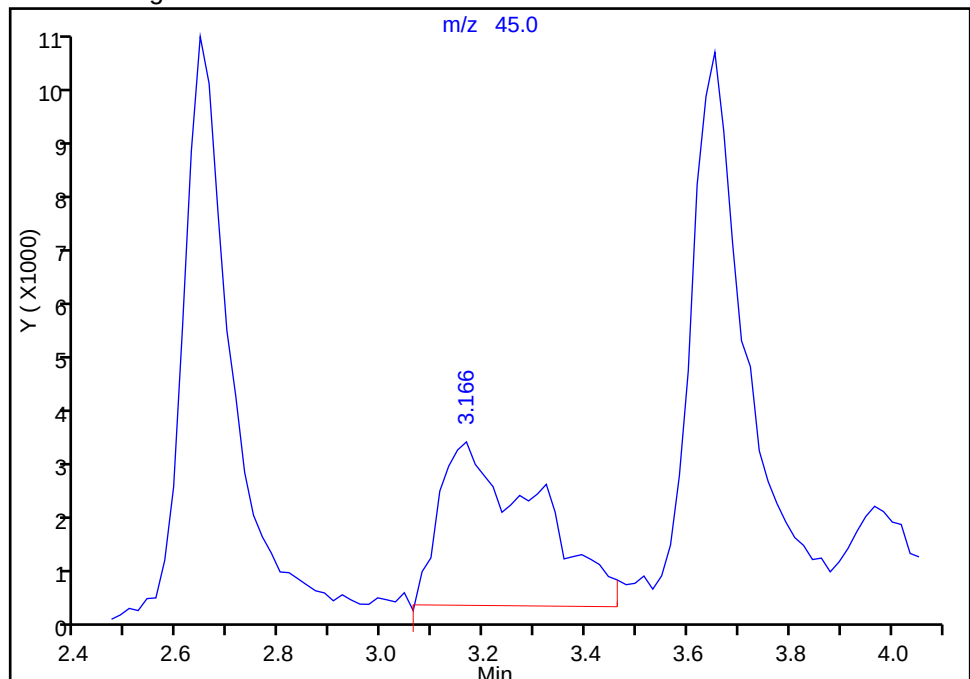
RT: 3.17
Area: 7223
Amount: 893.4032
Amount Units: ug/l

Processing Integration Results



RT: 3.17
Area: 37459
Amount: 366.0481
Amount Units: ug/l

Manual Integration Results



Reviewer: moanm, 09-Oct-2016 11:14:53

Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9971.D
 Lims ID: IC
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 08-Oct-2016 03:06:30 ALS Bottle#: 16 Worklist Smp#: 28
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: IC
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:18 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:15:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.000	3.985	0.015	96	289786	250.0	250.0	
* 2 Fluorobenzene	96	6.787	6.771	0.016	99	1664202	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.124	11.125	-0.001	87	458224	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.119	14.121	-0.002	97	717005	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.951	5.935	0.016	94	2269928	30.0	28.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.369	6.353	0.016	96	862204	30.0	29.2	
\$ 10 Toluene-d8 (Surr)	98	8.894	8.896	-0.002	92	4784336	30.0	28.4	
\$ 11 4-Bromofluorobenzene (Surr	95	12.778	12.780	-0.002	89	2497833	30.0	28.4	
34 Ethylene oxide	43	2.659	2.644	0.015	98	2046833	3000.0	3013.1	M
39 Ethanol	45	3.164	3.166	-0.002	87	117303	1200.0	1081.2	
43 Propene oxide	58	3.321	3.306	0.015	97	9776889	3000.0	3010.2	
49 Isopropyl alcohol	45		3.515				ND	ND	
51 Acetonitrile	41	3.826	3.828	-0.002	99	295895	300.0	295.7	
62 Isopropyl ether	87	4.767	4.751	0.016	99	1099279	30.0	29.1	
63 2-Chloro-1,3-butadiene	53	4.819	4.803	0.016	88	2024886	30.0	29.8	
64 Tert-butyl ethyl ether	59	5.185	5.169	0.016	99	3579641	30.0	29.7	
69 Ethyl acetate	43	5.429	5.430	-0.001	99	1152125	60.0	62.1	
70 Propionitrile	54	5.463	5.483	-0.020	97	363449	300.0	296.2	
72 Methacrylonitrile	41	5.638	5.639	-0.001	94	2775230	300.0	301.4	
83 Tert-amyl methyl ether	73	6.561	6.562	-0.001	98	2982655	30.0	31.9	
85 n-Butanol	56	7.153	7.172	-0.019	85	260884	750.0	748.9	
91 Methyl methacrylate	100	7.675	7.677	-0.002	95	453320	60.0	57.0	
95 2-Nitropropane	41	8.215	8.217	-0.002	98	205786	60.0	59.3	
107 Tetrahydrothiophene	60	10.148	10.150	-0.002	91	68132	60.0	57.8	
119 cis-1,4-Dichloro-2-butene	53	12.674	12.675	-0.001	94	489315	60.0	59.9	
135 1,2,3-Trimethylbenzene	105	14.206	14.191	0.016	97	4645453	30.0	28.9	
140 1,3,5-Trichlorobenzene	180	15.512	15.514	-0.002	98	2578589	30.0	28.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00006

Amount Added: 1.00

Units: uL

MV-Supp A_00021

Amount Added: 15.00

Units: uL

MV-ARCH SS A_00074

Amount Added: 2.40

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9971.D

Injection Date: 08-Oct-2016 03:06:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: IC

Worklist Smp#: 28

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

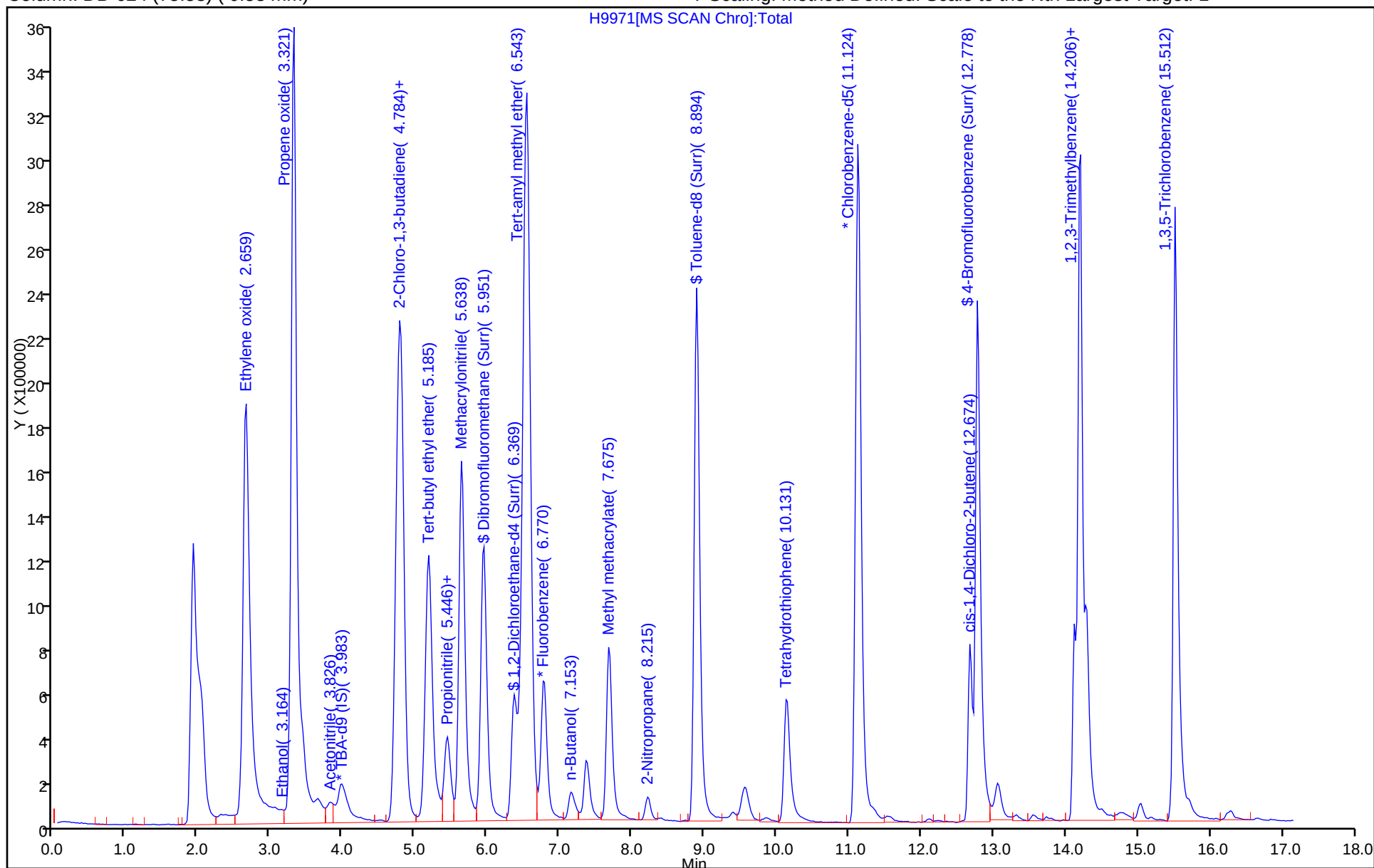
ALS Bottle#: 16

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

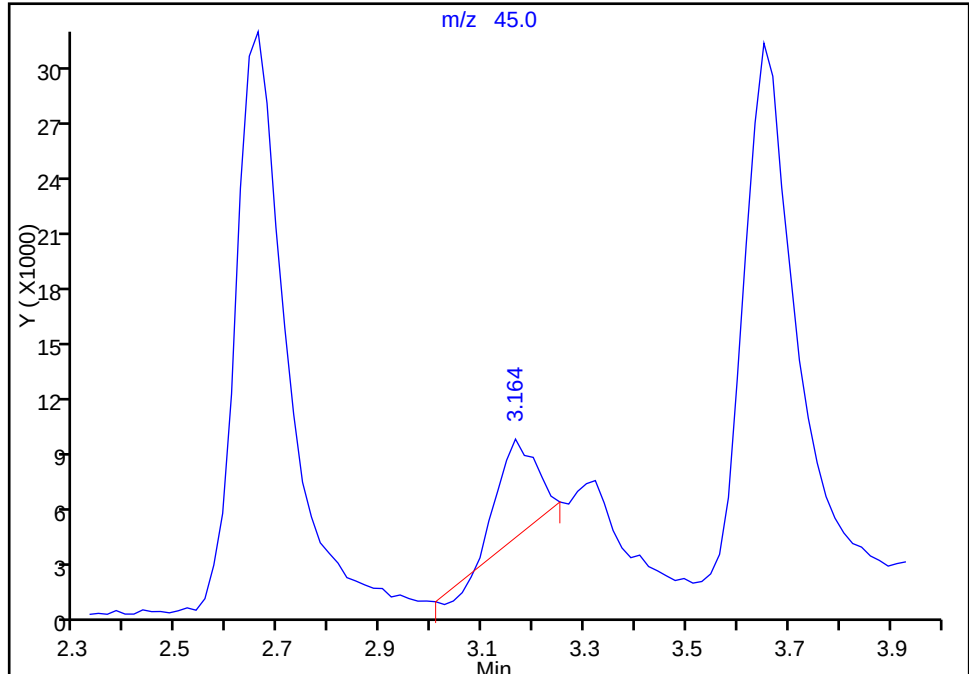
Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9971.D
Injection Date: 08-Oct-2016 03:06:30 Instrument ID: VMS_H
Lims ID: IC
Client ID:
Operator ID: bergerb ALS Bottle#: 16 Worklist Smp#: 28
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (75.53) (0.53 mm) Detector: MS SCAN

39 Ethanol, CAS: 64-17-5

Signal: 1

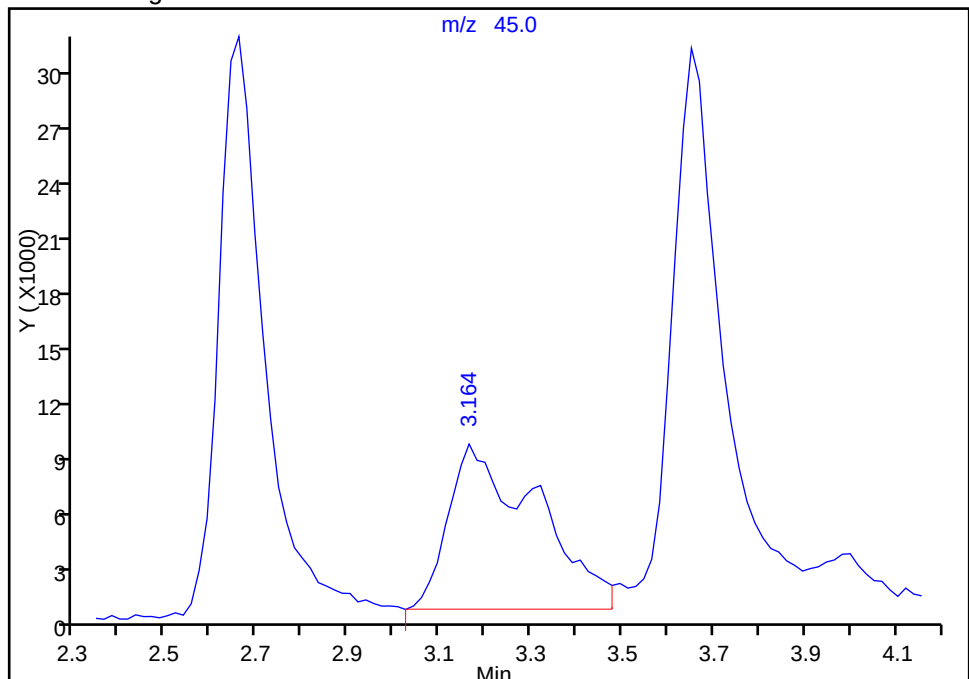
RT: 3.16
Area: 24391
Amount: 262.2422
Amount Units: ug/l

Processing Integration Results



RT: 3.16
Area: 117303
Amount: 1081.1858
Amount Units: ug/l

Manual Integration Results



Reviewer: moanm, 09-Oct-2016 11:15:24
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Lims ID: IC
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 08-Oct-2016 03:30:30 ALS Bottle#: 17 Worklist Smp#: 29
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: IC
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:20 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:15:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.979	3.985	-0.006	95	259991	250.0	250.0	
* 2 Fluorobenzene	96	6.783	6.771	0.012	99	1525516	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.119	11.125	-0.006	87	427631	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.115	14.121	-0.006	98	659802	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.947	5.935	0.012	94	4520484	60.0	61.6	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.365	6.353	0.012	96	1715985	60.0	63.3	
\$ 10 Toluene-d8 (Surr)	98	8.890	8.896	-0.006	92	9755135	60.0	62.0	
\$ 11 4-Bromofluorobenzene (Surr	95	12.774	12.780	-0.006	92	5025796	60.0	62.1	
34 Ethylene oxide	43	2.638	2.644	-0.006	98	4005126	6000.0	6431.9	
39 Ethanol	45	3.160	3.166	-0.006	90	224233	2400.0	2254.7	
43 Propene oxide	58	3.317	3.306	0.011	96	18644419	6000.0	6185.3	
49 Isopropyl alcohol	45		3.515				ND	ND	
51 Acetonitrile	41	3.822	3.828	-0.006	100	557785	600.0	596.5	
62 Isopropyl ether	87	4.762	4.751	0.011	99	2177962	60.0	62.8	
63 2-Chloro-1,3-butadiene	53	4.815	4.803	0.012	88	4146952	60.0	66.7	
64 Tert-butyl ethyl ether	59	5.180	5.169	0.011	99	7148454	60.0	64.7	
69 Ethyl acetate	43	5.424	5.430	-0.006	99	2120014	120.0	124.6	
70 Propionitrile	54	5.459	5.483	-0.024	98	753465	600.0	669.8	
72 Methacrylonitrile	41	5.633	5.639	-0.006	93	5409097	600.0	640.8	
83 Tert-amyl methyl ether	73	6.556	6.562	-0.006	98	5846535	60.0	68.2	
85 n-Butanol	56	7.148	7.172	-0.024	87	518206	1500.0	1603.4	
91 Methyl methacrylate	100	7.671	7.677	-0.006	95	861494	120.0	118.2	
95 2-Nitropropane	41	8.211	8.217	-0.006	97	383812	120.0	120.6	
107 Tetrahydrothiophene	60	10.144	10.150	-0.006	91	131390	120.0	119.4	
119 cis-1,4-Dichloro-2-butene	53	12.669	12.675	-0.006	93	947178	120.0	125.9	
135 1,2,3-Trimethylbenzene	105	14.202	14.191	0.012	98	9291433	60.0	62.7	
140 1,3,5-Trichlorobenzene	180	15.525	15.514	0.011	97	5185048	60.0	61.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Supp A_00021	Amount Added: 30.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 4.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D

Injection Date: 08-Oct-2016 03:30:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: IC

Worklist Smp#: 29

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

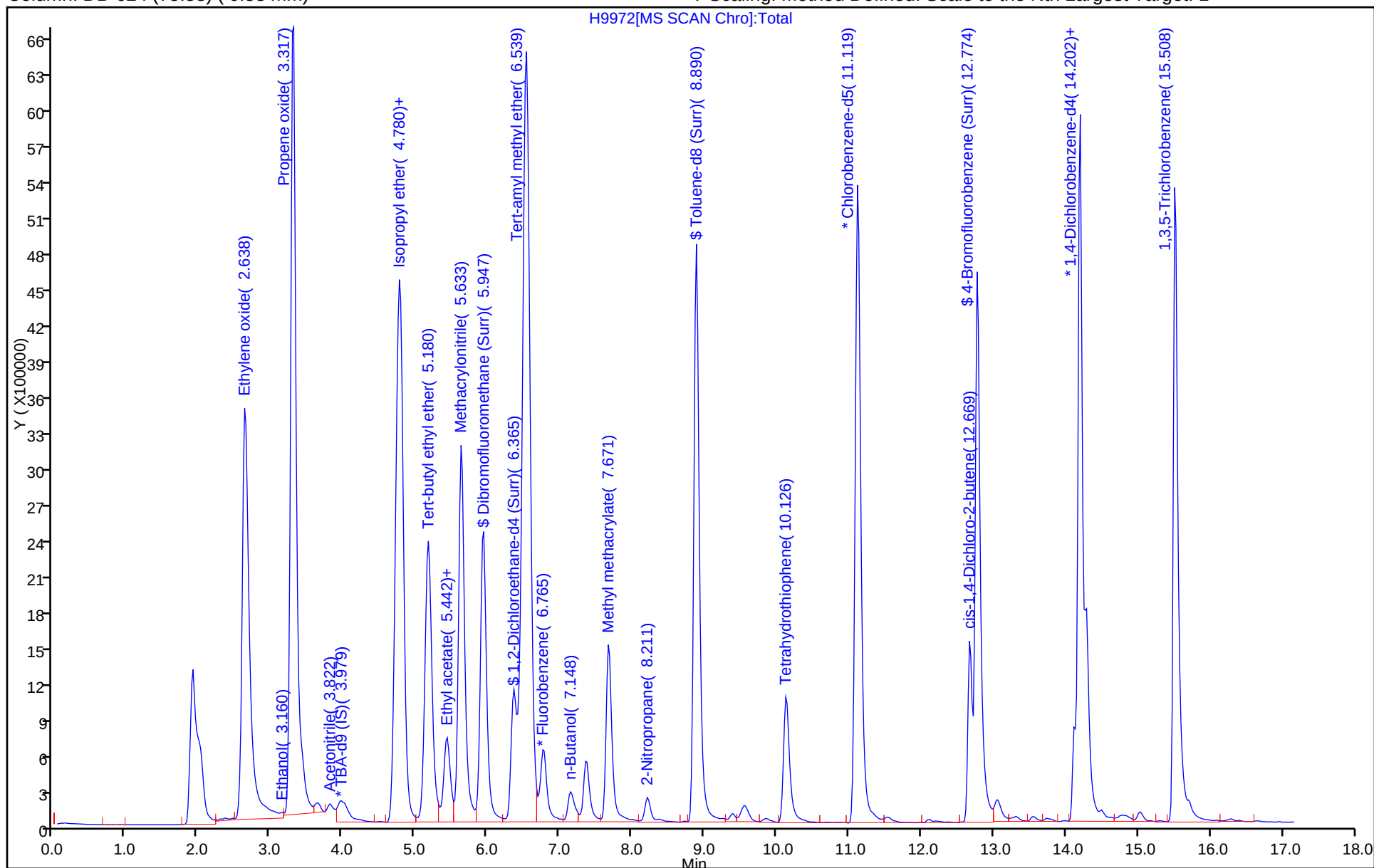
ALS Bottle#: 17

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-349323/10	H1084.D
Level 2	IC 280-349323/11	H1085.D
Level 3	IC 280-349323/12	H1086.D
Level 4	IC 280-349323/13	H1087.D
Level 5	ICIS 280-349323/14	H1088.D
Level 6	IC 280-349323/15	H1089.D
Level 7	IC 280-349323/16	H1090.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3204 0.4177	0.2995 0.4165	0.2763	0.2704	0.4072	Lin1	-0.091	0.4112							0.9930		0.9900
Chloromethane	0.3315 0.3092	0.2347 0.3147	0.2187	0.2624	0.2974	Lin1	-0.038	0.3092			0.1000				0.9970		0.9900
Vinyl chloride	0.3070 0.3408	0.2753 0.3341	0.2559	0.3031	0.3269	Ave		0.3061				10.2		30.0			
Bromomethane	0.2827 0.2941	0.2484 0.2748	0.2374	0.2812	0.2926	Ave		0.2731				8.0		15.0			
Chloroethane	0.2384 0.2189	0.2108 0.2046	0.1855	0.2041	0.2171	Ave		0.2113				7.7		15.0			
Dichlorofluoromethane	0.8251 0.7630	0.7188 0.7611	0.7101	0.7233	0.7366	Ave		0.7483				5.3		15.0			
Trichlorofluoromethane	0.5218 0.5406	0.4800 0.5438	0.4623	0.5066	0.5316	Ave		0.5124				6.1		15.0			
Ethyl ether	0.1758 0.1876	0.1633 0.1907	0.1594	0.1834	0.1810	Ave		0.1773				6.7		15.0			
Acrolein	0.0260 0.0279	0.0250 0.0296	0.0251	0.0272	0.0264	Ave		0.0267				6.1		15.0			
1,1-Dichloroethene	0.3343 0.3378	0.3019 0.3300	0.2843	0.3268	0.3364	Ave		0.3216				6.4		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.4142 0.4206	0.3840 0.4121	0.3762	0.3978	0.4215	Ave		0.4038				4.5		15.0			
Acetone	+++++ 0.0269	+++++ 0.0252	0.0255	0.0252	0.0233	Ave		0.0252				5.0		15.0			
Iodomethane	0.6936 0.7992	0.6568 0.8094	0.6361	0.7627	0.7871	Ave		0.7350				9.7		15.0			
Carbon disulfide	1.0923 1.2999	0.9269 1.2747	0.9008	1.2169	1.2789	Ave		1.1415				14.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.5488 0.6006	0.5524 0.5958	0.5238	0.6032	0.5921	Ave		0.5738				5.5		15.0			
Methyl acetate	0.0907 0.1109	0.0861 0.1078	0.0869	0.1015	0.0990	Ave		0.0975				10.2		15.0			
Methylene Chloride	++++ 0.3294	++++ 0.3302	0.3478	0.3708	0.3446	Ave		0.3446				4.9		15.0			
t-Butyl alcohol	++++ 1.2403	1.3221 1.1483	1.2441	1.2844	1.2196	Ave		1.2431				4.8		15.0			
Acrylonitrile	0.0272 0.0295	0.0244 0.0308	0.0267	0.0292	0.0272	Ave		0.0279				7.7		15.0			
Methyl tert-butyl ether	0.5623 0.5551	0.4960 0.5735	0.5085	0.5692	0.5417	Ave		0.5438				5.6		15.0			
trans-1,2-Dichloroethene	0.3519 0.3760	0.3400 0.3740	0.3279	0.3841	0.3790	Ave		0.3618				6.0		15.0			
Hexane	2.0478 2.6485	1.9727 2.5442	1.8141	2.3987	2.6075	Ave		2.2905				14.8		15.0			
1,1-Dichloroethane	0.7042 0.6982	0.6531 0.7119	0.6453	0.6815	0.6784	Ave		0.6818			0.1000	3.7		15.0			
Vinyl acetate	0.6507 0.7524	0.6164 0.7993	0.6474	0.6973	0.7455	Ave		0.7013				9.5		15.0			
cis-1,2-Dichloroethene	0.3735 0.3938	0.3535 0.3931	0.3525	0.3945	0.3887	Ave		0.3785				5.0		15.0			
2-Butanone (MEK)	++++ 0.0494	0.0434 0.0509	0.0500	0.0476	0.0484	Ave		0.0483				5.5		15.0			
2,2-Dichloropropane	++++ 0.4868	0.9756 0.4791	0.7022	0.5648	0.5116	Lin	0.4622	0.4713							1.0000		0.9900
sec-Butyl Alcohol	++++ 1.0949	1.2388 1.0895	1.0172	1.1674	1.0308	Ave		1.1064				7.6		15.0			
Bromochloromethane	0.1526 0.1884	0.1594 0.1908	0.1610	0.1892	0.1850	Ave		0.1752				9.5		15.0			
Tetrahydrofuran	++++ 0.0340	0.0403 0.0352	0.0392	0.0344	0.0326	Ave		0.0359				8.6		15.0			
Chloroform	0.6684 0.6453	0.6041 0.6522	0.5885	0.6345	0.6341	Ave		0.6324				4.4		30.0			
1,1,1-Trichloroethane	0.5577 0.5601	0.5155 0.5553	0.4996	0.5457	0.5467	Ave		0.5401				4.3		15.0			
Cyclohexane	0.6398 0.6415	0.5659 0.6065	0.5237	0.6258	0.6277	Ave		0.6044				7.3		15.0			
1,1-Dichloropropene	0.5347 0.5636	0.5087 0.5389	0.4911	0.5505	0.5522	Ave		0.5342				4.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.4917 0.5412	0.4766 0.5386	0.4733	0.5257	0.5280	Ave		0.5107				5.7		15.0			
Isobutyl alcohol	++++ 0.3983	0.3356 0.3972	0.3662	0.3671	0.3865	Ave		0.3751				6.4		15.0			
Benzene	1.0522 1.1392	0.9761 1.1201	0.9635	1.1247	1.1191	Ave		1.0707				6.9		15.0			
1,2-Dichloroethane	++++ 0.2573	0.2027 0.2648	0.2151	0.2477	0.2450	Ave		0.2388				10.3		15.0			
Trichloroethene	0.5654 0.4673	0.4026 0.4450	0.4098	0.4601	0.4548	Ave		0.4579				11.7		15.0			
2-Pentanone	++++ 0.2155	0.2137 0.1988	0.2230	0.2404	0.1841	Ave		0.2126				9.1		15.0			
Methylcyclohexane	0.5034 0.5746	0.4507 0.5281	0.4522	0.5558	0.5559	Ave		0.5172				9.7		15.0			
1,2-Dichloropropane	0.4804 0.4104	0.3929 0.4033	0.3853	0.4189	0.3980	Ave		0.4127				7.7		30.0			
Dibromomethane	0.2133 0.2231	0.1990 0.2240	0.1987	0.2289	0.2175	Ave		0.2149				5.6		15.0			
1,4-Dioxane	++++ 0.0013	0.0006 0.0014	0.0009	0.0011	0.0012	Lin2	-0.015	0.0013							0.9980		0.9900
Bromodichloromethane	0.5927 0.5730	0.5282 0.5707	0.5021	0.5623	0.5471	Ave		0.5537				5.5		15.0			
2-Chloroethyl vinyl ether	++++ 0.2083	0.1057 0.2341	0.1208	0.1707	0.1578	Qua	-0.141	0.1833	0.0008908						1.0000		0.9900
cis-1,3-Dichloropropene	1.9458 2.3589	2.0117 2.2871	2.0058	2.2998	2.2532	Ave		2.1660				7.9		15.0			
4-Methyl-2-pentanone (MIBK)	0.1427 0.1657	0.1402 0.1660	0.1443	0.1609	0.1510	Ave		0.1530				7.3		15.0			
Toluene	1.2659 1.2360	1.1225 1.1501	1.1244	1.2736	1.2333	Ave		1.2008				5.5		30.0			
trans-1,3-Dichloropropene	0.3780 0.3665	0.3252 0.3606	0.3260	0.3750	0.3567	Ave		0.3554				6.1		15.0			
Ethyl methacrylate	0.9960 1.3646	1.3258 1.3412	1.1524	1.3712	1.3136	Ave		1.2664				11.1		15.0			
1,1,2-Trichloroethane	0.3830 0.2497	0.2643 0.2383	0.2541	0.2609	0.2502	Lin2	0.0409	0.2412							0.9980		0.9900
Tetrachloroethene	1.6032 1.9214	1.7302 1.6854	1.6811	1.9983	1.9448	Ave		1.7949				8.7		15.0			
1,3-Dichloropropane	1.5417 1.7486	1.5852 1.6659	1.5836	1.7060	1.7026	Ave		1.6477				4.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.3281 0.4730	0.3560 0.4772	0.3680	0.4625	0.4413	Lin2	-0.167	0.4461							0.9910		0.9900
Dibromochloromethane	1.5486 1.9345	1.7127 1.8896	1.7297	1.9107	1.9307	Ave		1.8081				8.2		15.0			
1,2-Dibromoethane	1.1023 1.4515	1.1624 1.4034	1.1733	1.4246	1.3722	Ave		1.2985				11.3		15.0			
1-Chlorohexane	3.2308 2.6287	2.6486 2.2561	2.4789	2.7262	2.6017	Ave		2.6530				11.2		15.0			
Chlorobenzene	3.3855 3.9033	3.5116 3.5821	3.4782	4.0206	3.9177	Ave		3.6856			0.3000	6.9		15.0			
1,1,1,2-Tetrachloroethane	1.7092 1.8089	1.7229 1.7167	1.8101	1.8468	1.8046	Ave		1.7742				3.2		15.0			
Ethylbenzene	1.7371 1.8702	1.7375 1.6508	1.6886	1.9442	1.8903	Ave		1.7884				6.3		30.0			
m-Xylene & p-Xylene	2.3871 2.5862	2.2560 2.2457	2.4313	2.7204	2.5344	Ave		2.4516				7.1		15.0			
o-Xylene	2.0700 2.3436	2.1151 2.0885	2.1275	2.4240	2.3471	Ave		2.2165				6.7		15.0			
Styrene	3.2866 3.7429	3.3591 3.3457	3.3973	3.8759	3.7443	Ave		3.5360				6.8		15.0			
Bromoform	0.8683 1.1163	0.9669 1.0658	0.9934	1.1223	1.0972	Ave		1.0329			0.1000	9.1		15.0			
Isopropylbenzene	4.1840 4.4740	3.9365 4.3093	3.7885	4.1877	4.1370	Ave		4.1453				5.5		15.0			
Cyclohexanone	0.0145 0.0188	0.0167 0.0186	0.0177	0.0182	0.0179	Ave		0.0175				8.5		15.0			
1,1,2,2-Tetrachloroethane	0.9559 0.9503	0.8548 0.9851	0.8307	0.8723	0.8771	Ave		0.9037			0.3000	6.5		15.0			
Bromobenzene	0.9774 1.1915	0.9824 1.1848	0.9921	1.1464	1.1137	Ave		1.0840				9.0		15.0			
1,2,3-Trichloropropane	0.2454 0.2049	0.1884 0.2162	0.1805	0.1905	0.1918	Ave		0.2025				11.0		15.0			
trans-1,4-Dichloro-2-butene	++++ 0.1830	0.1529 0.1958	0.1624	0.1678	0.1676	Ave		0.1716				9.0		15.0			
N-Propylbenzene	1.0291 1.0757	0.9865 1.0005	0.9521	1.0684	1.0206	Ave		1.0190				4.3		15.0			
2-Chlorotoluene	0.8537 0.9260	0.8081 0.8947	0.7495	0.8812	0.8779	Ave		0.8559				6.9		15.0			
1,3,5-Trimethylbenzene	2.9221 3.2238	2.7668 3.0164	2.6578	3.1115	2.9853	Ave		2.9548				6.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323
SDG No.: _____
Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	1.0134 1.0621	0.9773 0.9933	0.8869	1.0585	1.0091	Ave		1.0001				5.9		15.0			
tert-Butylbenzene	3.6252 3.5728	3.2794 3.3656	3.2055	3.5047	3.3985	Ave		3.4217				4.5		15.0			
1,2,4-Trimethylbenzene	2.9764 3.0543	2.6329 2.9049	2.5788	2.9965	2.9039	Ave		2.8640				6.4		15.0			
sec-Butylbenzene	0.9750 0.9164	0.8951 0.8336	0.8227	0.9291	0.8935	Ave		0.8951				6.0		15.0			
1,3-Dichlorobenzene	1.6503 1.6473	1.5714 1.6086	1.4887	1.8154	1.6082	Ave		1.6271				6.1		15.0			
4-Isopropyltoluene	3.7287 3.9288	3.6637 3.5550	3.5792	4.0030	3.7916	Ave		3.7500				4.5		15.0			
1,4-Dichlorobenzene	2.3169 2.3499	2.0911 2.1999	2.0550	2.2654	2.2604	Ave		2.2198				5.0		15.0			
n-Butylbenzene	3.7170 3.7425	3.2902 3.4050	3.1692	3.6634	3.4392	Ave		3.4895				6.4		15.0			
1,2-Dichlorobenzene	1.6476 1.6912	1.4981 1.6577	1.4850	1.6856	1.6383	Ave		1.6148				5.3		15.0			
1,2-Dibromo-3-Chloropropane	0.1187 0.1851	0.1424 0.1970	0.1435	0.1682	0.1650	Lin2	-0.019	0.1738							0.9910		0.9900
1,2,4-Trichlorobenzene	1.0378 1.3083	1.0578 1.2370	1.0590	1.2479	1.1701	Ave		1.1597				9.4		15.0			
Hexachlorobutadiene	1.1287 1.0616	1.0712 0.9033	1.0396	1.1446	1.0288	Ave		1.0540				7.5		15.0			
Naphthalene	++++ 1.3609	0.9984 1.3558	1.0474	1.2465	1.2077	Ave		1.2028				12.7		15.0			
1,2,3-Trichlorobenzene	0.7951 0.9988	0.8225 0.9502	0.7840	0.9763	0.9140	Ave		0.8915				10.1		15.0			
Dibromofluoromethane (Surr)	++++ 0.5560	0.6553 0.5598	0.6064	0.5727	0.5651	Ave		0.5859				6.6		15.0			
1,2-Dichloroethane-d4 (Surr)	++++ 0.2370	0.2555 0.2450	0.2334	0.2346	0.2316	Ave		0.2395				3.8		15.0			
Toluene-d8 (Surr)	++++ 5.3774	6.3600 5.0435	5.9504	5.4785	5.4951	Ave		5.6175				8.3		15.0			
4-Bromofluorobenzene (Surr)	++++ 1.6763	1.9554 1.7121	1.6912	1.6081	1.5862	Ave		1.7049				7.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-349323/10	H1084.D
Level 2	IC 280-349323/11	H1085.D
Level 3	IC 280-349323/12	H1086.D
Level 4	IC 280-349323/13	H1087.D
Level 5	ICIS 280-349323/14	H1088.D
Level 6	IC 280-349323/15	H1089.D
Level 7	IC 280-349323/16	H1090.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Lin1	9322 1193575	29132 2215371	53279	130718	393457	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Lin1	9646 883600	22831 1674118	42181	126812	287351	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	8933 973852	26779 1776819	49346	146506	315875	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	8227 840473	24168 1461659	45795	135934	282744	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	6936 625405	20506 1088164	35772	98640	209752	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	24008 2180348	69922 4048138	136949	349628	711717	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	15184 1544826	46693 2892360	89167	244854	513581	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	5116 536048	15889 1014078	30751	88662	174873	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	7568 796141	24270 1573466	48367	131303	254579	3.00 300	10.00 600	20.0	50.0	100.0
1,1-Dichloroethene	FB	Ave	9728 965264	29374 1755185	54822	157951	324978	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	12052 1201891	37361 2192208	72553	192254	407276	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	+++++ 307691	+++++ 536620	19652	48722	90202	+++++ 120	+++++ 240	8.00	20.0	40.0
Iodomethane	FB	Ave	20182 2283820	63893 4305302	122675	368649	760494	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon disulfide	FB	Ave	31785 3714575	90170 6779879	173740	588211	1235691	0.300 30.0	1.00 60.0	2.00	5.00	10.0
3-Chloro-1-propene	FB	Ave	15970 1716412	53741 3169047	101030	291553	572088	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	13196 1584521	41867 2865672	83794	245205	478261	1.50 150	5.00 300	10.0	25.0	50.0
Methylene Chloride	FB	Ave	++++ 941261	++++ 1756161	67081	179240	332976	++++ 30.0	++++ 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd 9	Ave	++++ 333034	11098 608872	21984	57327	106048	++++ 300	10.0 600	20.0	50.0	100
Acrylonitrile	FB	Ave	7909 844169	23716 1640582	51482	141109	263115	3.00 300	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	16361 1586366	48256 3050426	98063	275140	523378	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	10240 1074570	33079 1989289	63239	185649	366168	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	14955 1699832	44093 3097132	81146	270387	573485	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	20492 1995332	63532 3786323	124456	329403	655418	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	37870 4300050	119933 8503080	249717	674054	1440670	0.600 60.0	2.00 120	4.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	10867 1125446	34390 2090770	67980	190676	375575	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	++++ 564758	16877 1083789	38550	91975	187045	++++ 120	4.00 240	8.00	20.0	40.0
2,2-Dichloropropane	FB	Lin	++++ 1391242	94909 2548114	135435	273018	494258	++++ 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butyl Alcohol	TBAd 9	Ave	++++ 440984	15598 866531	26960	78161	134439	++++ 450	15.0 900	30.0	75.0	150
Bromochloromethane	FB	Ave	4441 538490	15510 1014700	31054	91430	178715	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	++++ 194477	7845 374415	15117	33231	62932	++++ 60.0	2.00 120	4.00	10.0	20.0
Chloroform	FB	Ave	19449 1843926	58767 3468835	113496	306704	612648	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	16229 1600631	50151 2953441	96357	263782	528254	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	18617 1833142	55052 3225883	101004	302490	606459	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	15559 1610541	49483 2866460	94709	266079	533523	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	14309 1546511	46369 2864657	91288	254083	510146	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd 9	Ave	++++ 267391	7042 526467	16177	40963	84007	++++ 750	25.0 1500	50.0	125	250

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	30616 3255433	94961 5958042	185825	543644	1081285	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane	FB	Ave	++++ 735222	19720 1408482	41483	119732	236704	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	16452 1335492	39165 2366908	79040	222378	439419	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Ave	++++ 1231530	41581 2114889	86033	232373	355823	++++ 60.0	2.00 120	4.00	10.0	20.0
Methylcyclohexane	FB	Ave	14648 1641869	43848 2808763	87212	268628	537110	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	13979 1172837	38220 2145233	74303	202455	384586	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromomethane	FB	Ave	6208 637508	19363 1191251	38314	110617	210155	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	++++ 75496	1156 146041	3380	11002	23644	++++ 600	20.0 1200	40.0	100	200
Bromodichloromethane	FB	Ave	17248 1637493	51380 3035779	96844	271789	528552	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Qua	++++ 595269	10283 1245097	23296	82527	152467	++++ 30.0	1.00 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	14210 1514008	44964 2784143	89720	259239	495559	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	16611 1894453	54547 3532866	111302	311178	583633	1.20 120	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	36837 3531922	109198 6117231	216857	615591	1191626	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	10998 1047385	31632 1918245	62881	181239	344643	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	7274 875835	29634 1632703	51546	154560	288913	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Lin2	11145 713609	25711 1267516	49000	126112	241718	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	11708 1233161	38673 2051737	75196	225247	427737	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	11259 1122287	35432 2027895	70836	192305	374465	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Lin2	9584 1214260	31831 2323803	65846	208534	388265	1.20 120	4.00 240	8.00	20.0	40.0
Dibromochloromethane	CBNZ d5	Ave	11309 1241612	38281 2300224	77371	215371	424638	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	8050 931602	25982 1708434	52484	160583	301802	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	11797 843580	29600 1373204	55442	153648	286101	0.150 15.0	0.500 30.0	1.00	2.50	5.00
Chlorobenzene	CBNZ d5	Ave	24724 2505196	78491 4360578	155585	453205	861643	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	12482 1160971	38509 2089817	80970	208176	396900	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	12686 1200346	38835 2009592	75535	219152	415756	0.300 30.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	17433 1659850	50426 2733708	108757	306651	557412	0.300 30.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	15117 1504148	47275 2542322	95165	273234	516211	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	24002 2402287	75081 4072808	151964	436896	823497	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	6341 716442	21611 1297466	44437	126504	241316	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	46821 4355308	146613 7096679	290362	805830	1500356	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	4237 483061	14922 903943	31748	81938	157877	12.0 1200	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	10697 925126	31835 1622209	63670	167845	318108	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	10937 1159888	36588 1951142	76037	220591	403892	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	2746 199425	7018 356018	13834	36660	69558	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	++++ 178152	5694 322417	12447	32294	60786	++++ 30.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	11516 1047181	36742 1647672	72969	205594	370128	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	9553 901392	30096 1473339	57448	169574	318401	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	32699 3138211	103047 4967543	203701	598732	1082665	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	11340 1033955	36399 1635722	67978	203687	365968	0.300 30.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	40567 3477945	122140 5542525	245678	674396	1232528	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	33307 2973273	98061 4783891	197652	576601	1053171	0.300 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	10911 892089	33336 1372799	63056	178780	324038	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 349323

SDG No.: _____

Instrument ID: VMS_H GC Column: DB-624 (75. ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2016 10:59 Calibration End Date: 11/02/2016 13:22 Calibration ID: 27466

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,3-Dichlorobenzene	DCBd 4	Ave	18467 1603561	58526 2649080	114097	349330	583244	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	41725 3824517	136454 5854503	274320	770277	1375120	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	25927 2287522	77880 3622799	157501	435922	819785	0.300 30.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	41595 3643156	122542 5607439	242896	704937	1247306	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	18437 1646287	55796 2729963	113818	324349	594150	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	1328 180178	5303 324483	10998	32364	59838	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	11613 1273569	39396 2037125	81163	240128	424349	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	12630 1033466	39895 1487556	79681	220249	373099	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	++++ 1324814	37185 2232785	80279	239863	437996	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	8897 972341	30632 1564775	60085	187867	331474	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	++++ 1588716	63747 2977702	116957	276798	545970	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	++++ 677395	24851 1303396	45017	113376	223767	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	++++ 3451323	142157 6139561	266168	617536	1208566	++++ 30.0	1.00 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	++++ 1631797	72826 2819541	129623	309436	575266	++++ 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1084.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 02-Nov-2016 10:59:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:50:01 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.031	4.014	0.016	93	207088	250.0	250.0	
* 2 Fluorobenzene	96	6.800	6.801	-0.001	98	1212432	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.154	11.137	0.017	85	304289	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.149	14.133	0.016	95	466265	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111		5.965				ND	ND	
\$ 9 1,2-Dichloroethane-d4 (Sur	65		6.383				ND	ND	
\$ 10 Toluene-d8 (Surr)	98		8.908				ND	ND	
\$ 11 4-Bromofluorobenzene (Surr	95		12.792				ND	ND	
28 Dichlorodifluoromethane	85	2.167	2.168	-0.001	51	9322	0.3000	0.4544	
30 Chloromethane	50	2.271	2.272	-0.001	39	9646	0.3000	0.4437	
32 Vinyl chloride	62	2.411	2.412	-0.001	40	8933	0.3000	0.3008	
35 Bromomethane	94	2.689	2.708	-0.019	68	8227	0.3000	0.3106	
36 Chloroethane	64	2.777	2.777	0.000	66	6936	0.3000	0.3384	
37 Dichlorofluoromethane	67	2.951	2.952	-0.001	72	24008	0.3000	0.3308	
38 Trichlorofluoromethane	101	3.003	3.021	-0.018	80	15184	0.3000	0.3055	
40 Ethyl ether	59	3.247	3.248	-0.001	69	5116	0.3000	0.2975	
44 Acrolein	56	3.404	3.387	0.017	70	7568	3.00	2.92	
45 1,1-Dichloroethene	96	3.508	3.509	-0.001	86	9728	0.3000	0.3118	
46 1,1,2-Trichloro-1,2,2-trif	151	3.525	3.526	-0.001	82	12052	0.3000	0.3077	
47 Acetone	43		3.544				ND	ND	
48 Iodomethane	142	3.682	3.683	-0.001	83	20182	0.3000	0.2831	
50 Carbon disulfide	76	3.752	3.753	-0.001	93	31785	0.3000	0.2871	
52 3-Chloro-1-propene	41	3.856	3.857	-0.001	36	15970	0.3000	0.2869	
53 Methyl acetate	43	3.874	3.857	0.017	39	13196	1.50	1.39	
54 Methylene Chloride	84		3.979				ND	ND	
55 2-Methyl-2-propanol	59		4.101				ND	ND	
57 Acrylonitrile	53	4.257	4.240	0.017	49	7909	3.00	2.93	
56 Methyl tert-butyl ether	73	4.274	4.275	-0.001	78	16361	0.3000	0.3102	
58 trans-1,2-Dichloroethene	96	4.274	4.275	-0.001	80	10240	0.3000	0.2918	
59 Hexane	57	4.536	4.536	0.000	82	14955	0.3000	0.2682	
60 1,1-Dichloroethane	63	4.727	4.728	-0.001	53	20492	0.3000	0.3099	
61 Vinyl acetate	43	4.779	4.745	0.034	94	37870	0.6000	0.5567	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.406	5.390	0.016	73	10867	0.3000	0.2960	
67 2-Butanone (MEK)	43		5.407				ND	ND	
66 2,2-Dichloropropane	77		5.407				ND	ND	
71 sec-Butyl Alcohol	45		5.616				ND	ND	
73 Chlorobromomethane	128	5.702	5.686	0.016	87	4441	0.3000	0.2613	
74 Tetrahydrofuran	42		5.738				ND	ND	
75 Chloroform	83	5.772	5.756	0.016	66	19449	0.3000	0.3171	
76 1,1,1-Trichloroethane	97	6.016	6.017	-0.001	46	16229	0.3000	0.3098	
77 Cyclohexane	56	6.086	6.086	0.000	76	18617	0.3000	0.3176	
78 1,1-Dichloropropene	75	6.207	6.191	0.016	70	15559	0.3000	0.3003	
79 Carbon tetrachloride	117	6.242	6.208	0.034	66	14309	0.3000	0.2888	
80 Isobutyl alcohol	41		6.330				ND	ND	
81 Benzene	78	6.469	6.452	0.017	94	30616	0.3000	0.2948	
82 1,2-Dichloroethane	62		6.470				ND	ND	
84 n-Heptane	43	6.765	6.748	0.017	34	17554	0.3000	0.2827	
86 Trichloroethene	95	7.287	7.271	0.016	69	16452	0.3000	0.3705	
88 2-Pentanone	43		7.497				ND	ND	
89 Methylcyclohexane	55	7.531	7.532	-0.001	79	14648	0.3000	0.2920	
90 1,2-Dichloropropane	63	7.583	7.567	0.016	73	13979	0.3000	0.3492	
92 Dibromomethane	93	7.740	7.724	0.016	83	6208	0.3000	0.2978	
93 1,4-Dioxane	88		7.758				ND	ND	
94 Dichlorobromomethane	83	7.949	7.933	0.016	78	17248	0.3000	0.3211	
96 2-Chloroethyl vinyl ether	63		8.333				ND	ND	
97 cis-1,3-Dichloropropene	75	8.559	8.542	0.017	65	14210	0.3000	0.2695	
98 4-Methyl-2-pentanone (MIBK)	43	8.768	8.751	0.017	83	16611	1.20	1.12	
99 Toluene	91	9.011	9.012	-0.001	78	36837	0.3000	0.3163	
100 trans-1,3-Dichloropropene	75	9.342	9.326	0.016	33	10998	0.3000	0.3190	
101 Ethyl methacrylate	69	9.464	9.448	0.016	14	7274	0.3000	0.2360	
102 1,1,2-Trichloroethane	97	9.604	9.587	0.017	1	11145	0.3000	0.3070	
103 Tetrachloroethene	164	9.813	9.796	0.017	86	11708	0.3000	0.2680	
104 1,3-Dichloropropane	76	9.847	9.831	0.016	59	11259	0.3000	0.2807	
105 2-Hexanone	43	9.987	9.953	0.034	43	9584	1.20	1.26	
108 Chlorodibromomethane	129	10.196	10.179	0.017	55	11309	0.3000	0.2569	
109 Ethylene Dibromide	107	10.387	10.371	0.016	48	8050	0.3000	0.2547	
110 1-Chlorohexane	91	11.171	11.155	0.016	31	11797	0.1500	0.1827	
111 Chlorobenzene	112	11.206	11.189	0.017	34	24724	0.3000	0.2756	
112 1,1,1,2-Tetrachloroethane	131	11.328	11.311	0.017	31	12482	0.3000	0.2890	
113 Ethylbenzene	106	11.380	11.364	0.016	57	12686	0.3000	0.2914	
114 m-Xylene & p-Xylene	106	11.554	11.538	0.016	91	17433	0.3000	0.2921	
115 o-Xylene	106	12.129	12.112	0.017	79	15117	0.3000	0.2802	
116 Styrene	104	12.146	12.130	0.016	80	24002	0.3000	0.2788	
117 Bromoform	173	12.408	12.391	0.017	64	6341	0.3000	0.2522	
118 Isopropylbenzene	105	12.617	12.600	0.017	77	46821	0.3000	0.3028	
120 Cyclohexanone	55	12.738	12.722	0.016	49	4237	12.0	9.95	
122 Bromobenzene	156	13.000	12.983	0.017	70	10937	0.3000	0.2705	
121 1,1,2,2-Tetrachloroethane	83	13.000	12.983	0.017	12	10697	0.3000	0.3173	
123 1,2,3-Trichloropropane	110	13.069	13.035	0.034	1	2746	0.3000	0.3635	
124 trans-1,4-Dichloro-2-buten	53		13.053				ND	ND	
125 N-Propylbenzene	120	13.122	13.105	0.017	77	11516	0.3000	0.3030	
126 2-Chlorotoluene	126	13.226	13.210	0.016	23	9553	0.3000	0.2992	
127 1,3,5-Trimethylbenzene	105	13.331	13.332	-0.001	90	32699	0.3000	0.2967	
128 4-Chlorotoluene	126	13.365	13.349	0.016	85	11340	0.3000	0.3040	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.714	13.697	0.017	78	40567	0.3000	0.3178	
130 1,2,4-Trimethylbenzene	105	13.766	13.749	0.017	73	33307	0.3000	0.3118	
131 sec-Butylbenzene	134	13.958	13.941	0.017	61	10911	0.3000	0.3268	
132 1,3-Dichlorobenzene	146	14.079	14.063	0.016	1	18467	0.3000	0.3043	
133 4-Isopropyltoluene	119	14.114	14.098	0.016	52	41725	0.3000	0.2983	
134 1,4-Dichlorobenzene	146	14.184	14.167	0.017	37	25927	0.3000	0.3131	
137 n-Butylbenzene	91	14.550	14.533	0.017	89	41595	0.3000	0.3196	
138 1,2-Dichlorobenzene	146	14.567	14.551	0.016	58	18437	0.3000	0.3061	
139 1,2-Dibromo-3-Chloropropan	157	15.351	15.334	0.017	3	1328	0.3000	0.3122	
141 1,2,4-Trichlorobenzene	180	16.135	16.101	0.034	34	11613	0.3000	0.2685	
142 Hexachlorobutadiene	225	16.274	16.257	0.017	64	12630	0.3000	0.3213	
143 Naphthalene	128		16.327				ND	ND	
144 1,2,3-Trichlorobenzene	180	16.587	16.553	0.034	36	8897	0.3000	0.2675	
S 151 1,2-Dichloroethene, Total	96				0		0.6000	0.5878	
S 149 1,2-Dichloroethene, Total	1				0		0.6000	0.5878	
S 150 Xylenes, Total	106				0		0.6000	0.5723	
S 148 1,3-Dichloropropene, Total	1				0		0.6000	0.5885	
S 145 Trihalomethanes, Total	1				0		1.20	1.15	
S 146 Xylenes, Total (URS)	1				0		0.6000	0.5723	
S 147 Total BTEX	1				0			1.47	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 0.15	Units: uL
MV-Gas/Ket A_00052	Amount Added: 0.15	Units: uL
MV-2cleve+AVA_00018	Amount Added: 0.15	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1084.D

Injection Date: 02-Nov-2016 10:59:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 10

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

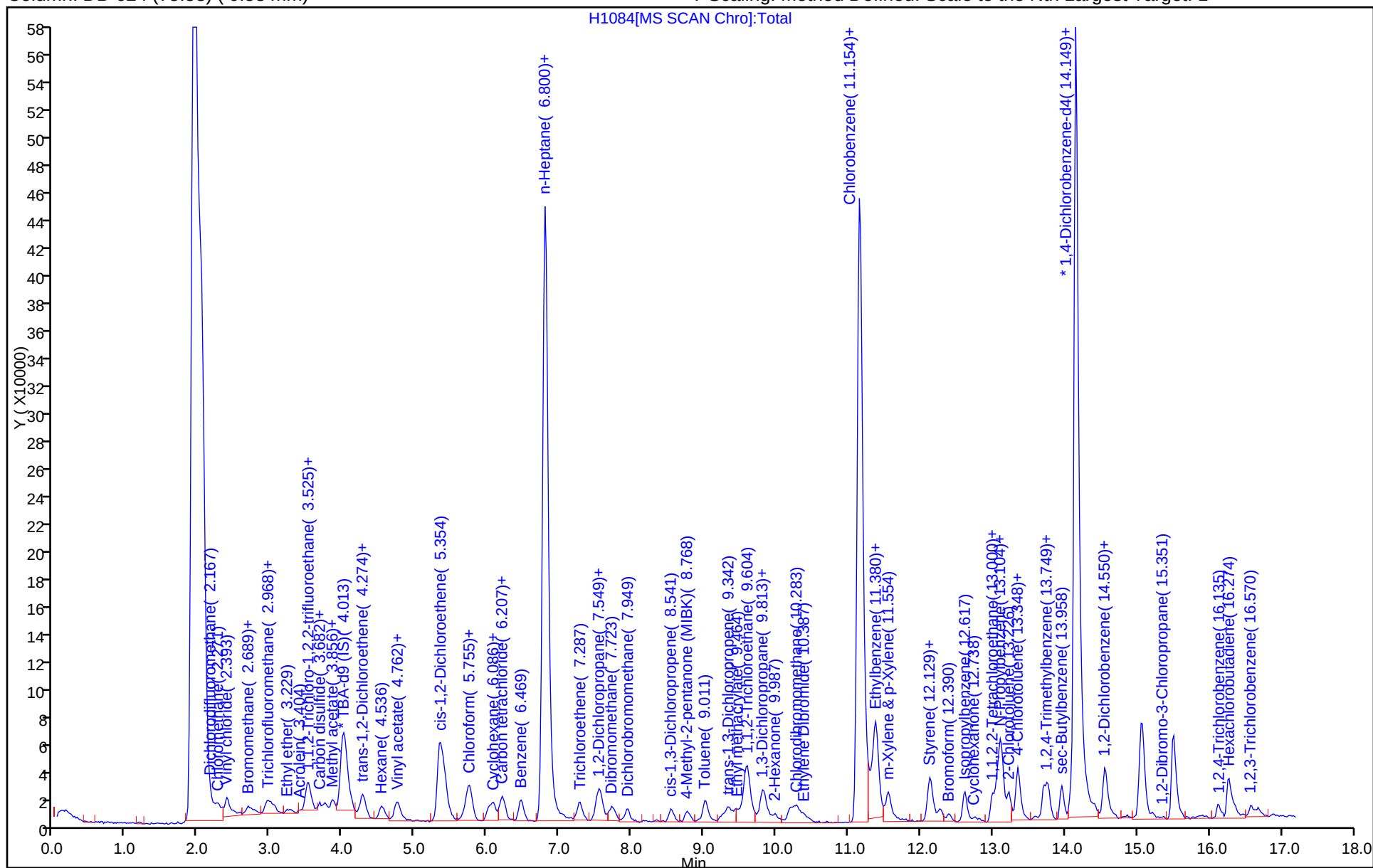
ALS Bottle#: 2

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1085.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 02-Nov-2016 11:23:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:50:03 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.018	4.014	0.004	96	209861	250.0	250.0	
* 2 Fluorobenzene	96	6.805	6.801	0.004	98	1216032	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.159	11.137	0.022	86	279396	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.155	14.133	0.022	97	465555	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.969	5.965	0.004	94	63747	1.00	1.12	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.387	6.383	0.004	93	24851	1.00	1.07	
\$ 10 Toluene-d8 (Surr)	98	8.930	8.908	0.022	92	142157	1.00	1.13	
\$ 11 4-Bromofluorobenzene (Surr	95	12.814	12.792	0.022	91	72826	1.00	1.15	
28 Dichlorodifluoromethane	85	2.172	2.168	0.004	97	29132	1.00	0.9489	
30 Chloromethane	50	2.277	2.272	0.005	99	22831	1.00	0.8811	
32 Vinyl chloride	62	2.399	2.412	-0.013	96	26779	1.00	0.8992	
35 Bromomethane	94	2.695	2.708	-0.013	91	24168	1.00	0.9098	
36 Chloroethane	64	2.782	2.777	0.005	98	20506	1.00	1.00	
37 Dichlorofluoromethane	67	2.956	2.952	0.004	98	69922	1.00	0.9605	
38 Trichlorofluoromethane	101	3.008	3.021	-0.013	98	46693	1.00	0.9368	
40 Ethyl ether	59	3.252	3.248	0.004	94	15889	1.00	0.9211	
44 Acrolein	56	3.409	3.387	0.022	98	24270	10.0	9.34	
45 1,1-Dichloroethene	96	3.513	3.509	0.004	97	29374	1.00	0.9388	
46 1,1,2-Trichloro-1,2,2-trif	151	3.531	3.526	0.005	96	37361	1.00	0.9511	
47 Acetone	43	3.548	3.544	0.004	98	9381	4.00	3.82	
48 Iodomethane	142	3.688	3.683	0.005	98	63893	1.00	0.8936	
50 Carbon disulfide	76	3.757	3.753	0.004	99	90170	1.00	0.8120	
52 3-Chloro-1-propene	41	3.862	3.857	0.005	85	53741	1.00	0.9627	
53 Methyl acetate	43	3.862	3.857	0.005	96	41867	5.00	4.41	
54 Methylene Chloride	84	3.984	3.979	0.005	99	41146	1.00	1.23	
55 2-Methyl-2-propanol	59	4.123	4.101	0.022	92	11098	10.0	10.6	
57 Acrylonitrile	53	4.262	4.240	0.022	97	23716	10.0	8.75	
56 Methyl tert-butyl ether	73	4.280	4.275	0.005	92	48256	1.00	0.9122	
58 trans-1,2-Dichloroethene	96	4.280	4.275	0.005	99	33079	1.00	0.9397	
59 Hexane	57	4.541	4.536	0.005	94	44093	1.00	0.8612	
60 1,1-Dichloroethane	63	4.733	4.728	0.005	96	63532	1.00	0.9579	
61 Vinyl acetate	43	4.767	4.745	0.022	97	119933	2.00	1.76	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.412	5.390	0.022	84	34390	1.00	0.9339	
67 2-Butanone (MEK)	43	5.412	5.407	0.005	42	16877	4.00	3.59	
66 2,2-Dichloropropane	77	5.394	5.407	-0.013	65	94909	1.00	1.09	
71 sec-Butyl Alcohol	45	5.638	5.616	0.022	95	15598	15.0	16.8	
73 Chlorobromomethane	128	5.690	5.686	0.004	97	15510	1.00	0.9100	
74 Tetrahydrofuran	42	5.777	5.738	0.039	45	7845	2.00	2.24	
75 Chloroform	83	5.777	5.756	0.021	94	58767	1.00	0.9552	
76 1,1,1-Trichloroethane	97	6.021	6.017	0.004	99	50151	1.00	0.9545	
77 Cyclohexane	56	6.091	6.086	0.005	89	55052	1.00	0.9363	
78 1,1-Dichloropropene	75	6.195	6.191	0.004	98	49483	1.00	0.9521	
79 Carbon tetrachloride	117	6.230	6.208	0.022	98	46369	1.00	0.9332	
80 Isobutyl alcohol	41	6.335	6.330	0.005	86	7042	25.0	22.4	
81 Benzene	78	6.474	6.452	0.022	97	94961	1.00	0.9117	
82 1,2-Dichloroethane	62	6.492	6.470	0.022	93	19720	1.00	0.8490	
84 n-Heptane	43	6.753	6.748	0.005	92	53069	1.00	0.8522	
86 Trichloroethene	95	7.275	7.271	0.004	97	39165	1.00	0.8793	
88 2-Pentanone	43	7.519	7.497	0.022	97	41581	2.00	2.01	
89 Methylcyclohexane	55	7.536	7.532	0.004	92	43848	1.00	0.8714	
90 1,2-Dichloropropane	63	7.571	7.567	0.004	95	38220	1.00	0.9519	
92 Dibromomethane	93	7.745	7.724	0.021	97	19363	1.00	0.9261	
93 1,4-Dioxane	88	7.798	7.758	0.040	43	1156	20.0	20.6	
94 Dichlorobromomethane	83	7.937	7.933	0.004	99	51380	1.00	0.9538	
96 2-Chloroethyl vinyl ether	63	8.355	8.333	0.022	91	10283	1.00	1.34	
97 cis-1,3-Dichloropropene	75	8.547	8.542	0.005	96	44964	1.00	0.9287	
98 4-Methyl-2-pentanone (MIBK)	43	8.773	8.751	0.022	96	54547	4.00	3.67	
99 Toluene	91	9.017	9.012	0.005	99	109198	1.00	0.9348	
100 trans-1,3-Dichloropropene	75	9.348	9.326	0.022	91	31632	1.00	0.9148	
101 Ethyl methacrylate	69	9.470	9.448	0.022	88	29634	1.00	1.05	
102 1,1,2-Trichloroethane	97	9.609	9.587	0.022	87	25711	1.00	0.9262	
103 Tetrachloroethene	164	9.818	9.796	0.022	97	38673	1.00	0.9640	
104 1,3-Dichloropropane	76	9.853	9.831	0.022	91	35432	1.00	0.9621	
105 2-Hexanone	43	9.992	9.953	0.039	96	31831	4.00	3.57	
108 Chlorodibromomethane	129	10.201	10.179	0.022	91	38281	1.00	0.9472	
109 Ethylene Dibromide	107	10.393	10.371	0.022	99	25982	1.00	0.8952	
110 1-Chlorohexane	91	11.176	11.155	0.021	45	29600	0.5000	0.4992	
111 Chlorobenzene	112	11.211	11.189	0.022	94	78491	1.00	0.9528	
112 1,1,1,2-Tetrachloroethane	131	11.333	11.311	0.022	83	38509	1.00	0.9711	
113 Ethylbenzene	106	11.385	11.364	0.021	99	38835	1.00	0.9715	
114 m-Xylene & p-Xylene	106	11.560	11.538	0.022	100	50426	1.00	0.9202	
115 o-Xylene	106	12.134	12.112	0.022	96	47275	1.00	0.9542	
116 Styrene	104	12.152	12.130	0.022	94	75081	1.00	0.9500	
117 Bromoform	173	12.413	12.391	0.022	95	21611	1.00	0.9361	
118 Isopropylbenzene	105	12.622	12.600	0.022	95	146613	1.00	0.9496	
120 Cyclohexanone	55	12.744	12.722	0.022	87	14922	40.0	38.2	
122 Bromobenzene	156	13.005	12.983	0.022	92	36588	1.00	0.9062	
121 1,1,2,2-Tetrachloroethane	83	13.005	12.983	0.022	71	31835	1.00	0.9458	
123 1,2,3-Trichloropropane	110	13.057	13.035	0.022	78	7018	1.00	0.9304	
124 trans-1,4-Dichloro-2-buten	53	13.075	13.053	0.022	59	5694	1.00	0.8910	
125 N-Propylbenzene	120	13.127	13.105	0.022	99	36742	1.00	0.9681	
126 2-Chlorotoluene	126	13.232	13.210	0.022	97	30096	1.00	0.9441	
127 1,3,5-Trimethylbenzene	105	13.336	13.332	0.004	96	103047	1.00	0.9364	
128 4-Chlorotoluene	126	13.371	13.349	0.022	98	36399	1.00	0.9772	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.719	13.697	0.022	93	122140	1.00	0.9584	
130 1,2,4-Trimethylbenzene	105	13.771	13.749	0.022	94	98061	1.00	0.9193	
131 sec-Butylbenzene	134	13.963	13.941	0.022	93	33336	1.00	1.00	
132 1,3-Dichlorobenzene	146	14.085	14.063	0.022	96	58526	1.00	0.9658	
133 4-Isopropyltoluene	119	14.120	14.098	0.022	98	136454	1.00	0.9770	
134 1,4-Dichlorobenzene	146	14.172	14.167	0.005	95	77880	1.00	0.9420	
137 n-Butylbenzene	91	14.555	14.533	0.022	97	122542	1.00	0.9429	
138 1,2-Dichlorobenzene	146	14.573	14.551	0.022	97	55796	1.00	0.9277	
139 1,2-Dibromo-3-Chloropropan	157	15.356	15.334	0.022	93	5303	1.00	0.9266	
141 1,2,4-Trichlorobenzene	180	16.123	16.101	0.022	94	39396	1.00	0.9121	
142 Hexachlorobutadiene	225	16.262	16.257	0.005	96	39895	1.00	1.02	
143 Naphthalene	128	16.349	16.327	0.022	97	37185	1.00	0.8301	
144 1,2,3-Trichlorobenzene	180	16.575	16.553	0.022	96	30632	1.00	0.9225	
S 151 1,2-Dichloroethene, Total	96				0		2.00	1.87	
S 149 1,2-Dichloroethene, Total	1				0		2.00	1.87	
S 150 Xylenes, Total	106				0		2.00	1.87	
S 148 1,3-Dichloropropene, Total	1				0		2.00	1.84	
S 145 Trihalomethanes, Total	1				0		4.00	3.79	
S 146 Xylenes, Total (URS)	1				0		2.00	1.87	
S 147 Total BTEX	1				0			4.69	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 0.50	Units: uL
MV-Gas/Ket A_00052	Amount Added: 0.50	Units: uL
MV-2cleve+AVA_00018	Amount Added: 0.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.08	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1085.D

Injection Date: 02-Nov-2016 11:23:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 11

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

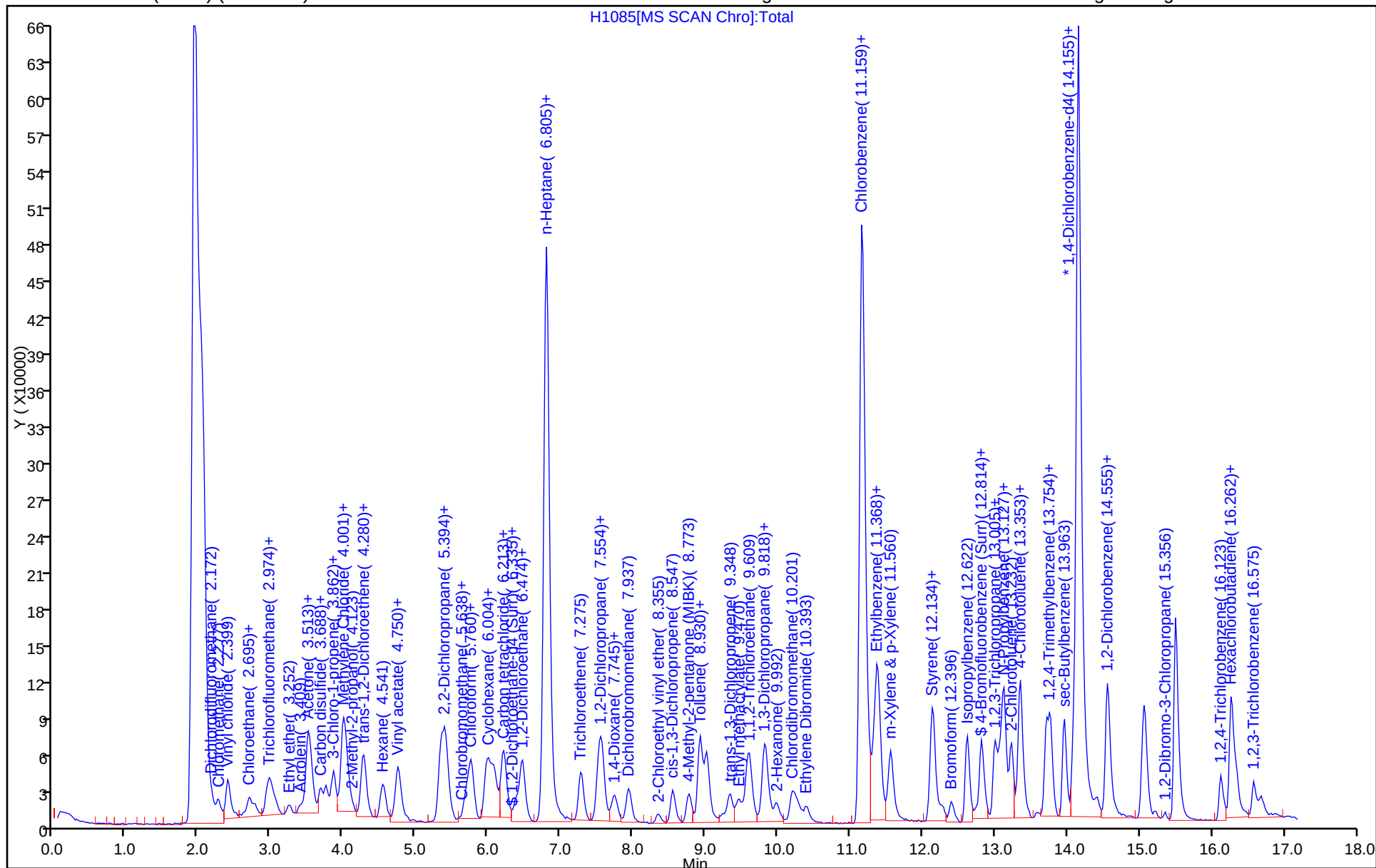
ALS Bottle#: 3

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1086.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 02-Nov-2016 11:47:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:50:08 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.013	4.014	-0.001	96	220874	250.0	250.0	
* 2 Fluorobenzene	96	6.799	6.801	-0.002	99	1205407	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.153	11.137	0.016	86	279570	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.149	14.133	0.016	96	479023	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.963	5.965	-0.002	93	116957	2.00	2.07	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.381	6.383	-0.002	96	45017	2.00	1.95	
\$ 10 Toluene-d8 (Surr)	98	8.924	8.908	0.016	92	266168	2.00	2.12	
\$ 11 4-Bromofluorobenzene (Surr	95	12.808	12.792	0.016	91	129623	2.00	1.98	
28 Dichlorodifluoromethane	85	2.166	2.168	-0.002	99	53279	2.00	1.56	
30 Chloromethane	50	2.271	2.272	-0.001	98	42181	2.00	1.54	
32 Vinyl chloride	62	2.393	2.412	-0.019	97	49346	2.00	1.67	
35 Bromomethane	94	2.689	2.708	-0.019	91	45795	2.00	1.74	
36 Chloroethane	64	2.776	2.777	-0.001	98	35772	2.00	1.76	
37 Dichlorofluoromethane	67	2.950	2.952	-0.002	98	136949	2.00	1.90	
38 Trichlorofluoromethane	101	3.002	3.021	-0.019	98	89167	2.00	1.80	
40 Ethyl ether	59	3.246	3.248	-0.002	96	30751	2.00	1.80	
44 Acrolein	56	3.403	3.387	0.016	98	48367	20.0	18.8	
45 1,1-Dichloroethene	96	3.507	3.509	-0.002	96	54822	2.00	1.77	
46 1,1,2-Trichloro-1,2,2-trif	151	3.525	3.526	-0.001	96	72553	2.00	1.86	
47 Acetone	43	3.560	3.544	0.016	37	19652	8.00	8.08	
48 Iodomethane	142	3.682	3.683	-0.001	98	122675	2.00	1.73	
50 Carbon disulfide	76	3.751	3.753	-0.002	99	173740	2.00	1.58	
52 3-Chloro-1-propene	41	3.856	3.857	-0.001	87	101030	2.00	1.83	
53 Methyl acetate	43	3.856	3.857	-0.001	97	83794	10.0	8.91	
54 Methylene Chloride	84	3.978	3.979	-0.001	99	67081	2.00	2.02	
55 2-Methyl-2-propanol	59	4.117	4.101	0.016	96	21984	20.0	20.0	
57 Acrylonitrile	53	4.239	4.240	-0.001	96	51482	20.0	19.2	
56 Methyl tert-butyl ether	73	4.274	4.275	-0.001	95	98063	2.00	1.87	
58 trans-1,2-Dichloroethene	96	4.274	4.275	-0.001	98	63239	2.00	1.81	
59 Hexane	57	4.535	4.536	-0.001	92	81146	2.00	1.58	
60 1,1-Dichloroethane	63	4.727	4.728	-0.001	96	124456	2.00	1.89	
61 Vinyl acetate	43	4.761	4.745	0.016	97	249717	4.00	3.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.406	5.390	0.016	84	67980	2.00	1.86	
67 2-Butanone (MEK)	43	5.406	5.407	-0.001	44	38550	8.00	8.28	
66 2,2-Dichloropropane	77	5.406	5.407	-0.001	76	135435	2.00	2.00	
71 sec-Butyl Alcohol	45	5.632	5.616	0.016	95	26960	30.0	27.6	
73 Chlorobromomethane	128	5.684	5.686	-0.002	97	31054	2.00	1.84	
74 Tetrahydrofuran	42	5.754	5.738	0.016	48	15117	4.00	4.36	
75 Chloroform	83	5.772	5.756	0.016	95	113496	2.00	1.86	
76 1,1,1-Trichloroethane	97	6.015	6.017	-0.002	98	96357	2.00	1.85	
77 Cyclohexane	56	6.085	6.086	-0.001	91	101004	2.00	1.73	
78 1,1-Dichloropropene	75	6.190	6.191	-0.001	98	94709	2.00	1.84	
79 Carbon tetrachloride	117	6.224	6.208	0.016	97	91288	2.00	1.85	
80 Isobutyl alcohol	41	6.346	6.330	0.016	93	16177	50.0	48.8	
81 Benzene	78	6.468	6.452	0.016	97	185825	2.00	1.80	
82 1,2-Dichloroethane	62	6.486	6.470	0.016	93	41483	2.00	1.80	
84 n-Heptane	43	6.747	6.748	-0.001	93	97818	2.00	1.58	
86 Trichloroethene	95	7.269	7.271	-0.002	98	79040	2.00	1.79	
88 2-Pentanone	43	7.513	7.497	0.016	98	86033	4.00	4.20	
89 Methylcyclohexane	55	7.531	7.532	-0.001	91	87212	2.00	1.75	
90 1,2-Dichloropropane	63	7.565	7.567	-0.002	95	74303	2.00	1.87	
92 Dibromomethane	93	7.740	7.724	0.016	98	38314	2.00	1.85	
93 1,4-Dioxane	88	7.774	7.758	0.016	30	3380	40.0	38.1	
94 Dichlorobromomethane	83	7.931	7.933	-0.002	99	96844	2.00	1.81	
96 2-Chloroethyl vinyl ether	63	8.332	8.333	-0.001	91	23296	2.00	2.07	
97 cis-1,3-Dichloropropene	75	8.541	8.542	-0.001	97	89720	2.00	1.85	
98 4-Methyl-2-pentanone (MIBK)	43	8.767	8.751	0.016	96	111302	8.00	7.54	
99 Toluene	91	9.011	9.012	-0.001	99	216857	2.00	1.87	
100 trans-1,3-Dichloropropene	75	9.324	9.326	-0.002	92	62881	2.00	1.83	
101 Ethyl methacrylate	69	9.464	9.448	0.016	88	51546	2.00	1.82	
102 1,1,2-Trichloroethane	97	9.586	9.587	-0.001	71	49000	2.00	1.94	
103 Tetrachloroethene	164	9.812	9.796	0.016	97	75196	2.00	1.87	
104 1,3-Dichloropropane	76	9.847	9.831	0.016	87	70836	2.00	1.92	
105 2-Hexanone	43	9.986	9.953	0.033	97	65846	8.00	6.97	
108 Chlorodibromomethane	129	10.195	10.179	0.016	90	77371	2.00	1.91	
109 Ethylene Dibromide	107	10.387	10.371	0.016	98	52484	2.00	1.81	
110 1-Chlorohexane	91	11.170	11.155	0.015	40	55442	1.00	0.9344	
111 Chlorobenzene	112	11.205	11.189	0.016	95	155585	2.00	1.89	
112 1,1,1,2-Tetrachloroethane	131	11.327	11.311	0.016	91	80970	2.00	2.04	
113 Ethylbenzene	106	11.379	11.364	0.015	99	75535	2.00	1.89	
114 m-Xylene & p-Xylene	106	11.554	11.538	0.016	100	108757	2.00	1.98	
115 o-Xylene	106	12.128	12.112	0.016	96	95165	2.00	1.92	
116 Styrene	104	12.146	12.130	0.016	95	151964	2.00	1.92	
117 Bromoform	173	12.407	12.391	0.016	98	44437	2.00	1.92	
118 Isopropylbenzene	105	12.616	12.600	0.016	95	290362	2.00	1.83	
120 Cyclohexanone	55	12.755	12.722	0.033	88	31748	80.0	81.2	
122 Bromobenzene	156	12.999	12.983	0.016	92	76037	2.00	1.83	
121 1,1,2,2-Tetrachloroethane	83	12.999	12.983	0.016	71	63670	2.00	1.84	
123 1,2,3-Trichloropropane	110	13.051	13.035	0.016	77	13834	2.00	1.78	
124 trans-1,4-Dichloro-2-buten	53	13.069	13.053	0.016	61	12447	2.00	1.89	
125 N-Propylbenzene	120	13.121	13.105	0.016	99	72969	2.00	1.87	
126 2-Chlorotoluene	126	13.226	13.210	0.016	96	57448	2.00	1.75	
127 1,3,5-Trimethylbenzene	105	13.330	13.332	-0.002	96	203701	2.00	1.80	
128 4-Chlorotoluene	126	13.365	13.349	0.016	98	67978	2.00	1.77	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.713	13.697	0.016	93	245678	2.00	1.87	
130 1,2,4-Trimethylbenzene	105	13.765	13.749	0.016	95	197652	2.00	1.80	
131 sec-Butylbenzene	134	13.957	13.941	0.016	93	63056	2.00	1.84	
132 1,3-Dichlorobenzene	146	14.079	14.063	0.016	92	114097	2.00	1.83	
133 4-Isopropyltoluene	119	14.114	14.098	0.016	98	274320	2.00	1.91	
134 1,4-Dichlorobenzene	146	14.183	14.167	0.016	95	157501	2.00	1.85	
137 n-Butylbenzene	91	14.549	14.533	0.016	97	242896	2.00	1.82	
138 1,2-Dichlorobenzene	146	14.567	14.551	0.016	98	113818	2.00	1.84	
139 1,2-Dibromo-3-Chloropropan	157	15.350	15.334	0.016	93	10998	2.00	1.76	
141 1,2,4-Trichlorobenzene	180	16.117	16.101	0.016	94	81163	2.00	1.83	
142 Hexachlorobutadiene	225	16.273	16.257	0.016	95	79681	2.00	1.97	
143 Naphthalene	128	16.343	16.327	0.016	97	80279	2.00	1.74	
144 1,2,3-Trichlorobenzene	180	16.569	16.553	0.016	95	60085	2.00	1.76	
S 151 1,2-Dichloroethene, Total	96				0		4.00	3.67	
S 149 1,2-Dichloroethene, Total	1				0		4.00	3.67	
S 150 Xylenes, Total	106				0		4.00	3.90	
S 148 1,3-Dichloropropene, Total	1				0		4.00	3.69	
S 145 Trihalomethanes, Total	1				0		8.00	7.51	
S 146 Xylenes, Total (URS)	1				0		4.00	3.90	
S 147 Total BTEX	1				0			9.46	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 1.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 1.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 1.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.16	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1086.D

Injection Date: 02-Nov-2016 11:47:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 12

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

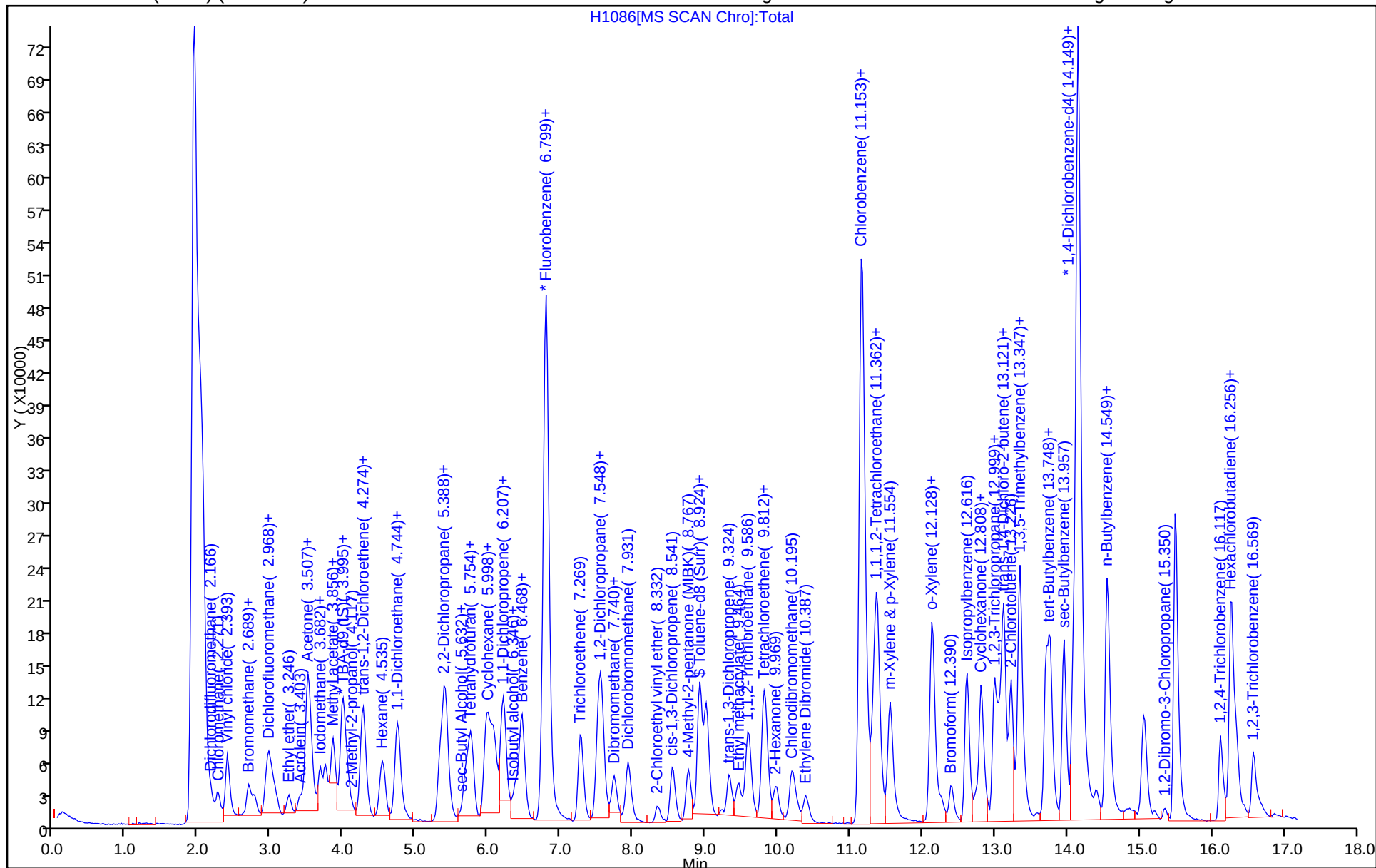
ALS Bottle#: 4

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1087.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 02-Nov-2016 12:11:30 ALS Bottle#: 5 Worklist Smp#: 13
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:50:12 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.013	4.014	-0.001	96	223171	250.0	250.0	
* 2 Fluorobenzene	96	6.799	6.801	-0.002	98	1208372	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.153	11.137	0.016	87	281802	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.149	14.133	0.016	96	481066	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.963	5.965	-0.002	94	276798	5.00	4.89	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.381	6.383	-0.002	95	113376	5.00	4.90	
\$ 10 Toluene-d8 (Surr)	98	8.924	8.908	0.016	91	617536	5.00	4.88	
\$ 11 4-Bromofluorobenzene (Surr	95	12.808	12.792	0.016	90	309436	5.00	4.72	
28 Dichlorodifluoromethane	85	2.167	2.168	-0.001	99	130718	5.00	3.51	
30 Chloromethane	50	2.288	2.272	0.016	99	126812	5.00	4.37	
32 Vinyl chloride	62	2.410	2.412	-0.002	98	146506	5.00	4.95	
35 Bromomethane	94	2.706	2.708	-0.002	90	135934	5.00	5.15	
36 Chloroethane	64	2.776	2.777	-0.001	99	98640	5.00	4.83	
37 Dichlorofluoromethane	67	2.968	2.952	0.016	98	349628	5.00	4.83	
38 Trichlorofluoromethane	101	3.020	3.021	-0.001	99	244854	5.00	4.94	
40 Ethyl ether	59	3.246	3.248	-0.002	96	88662	5.00	5.17	
44 Acrolein	56	3.403	3.387	0.016	98	131303	50.0	50.8	
45 1,1-Dichloroethene	96	3.508	3.509	-0.001	97	157951	5.00	5.08	
46 1,1,2-Trichloro-1,2,2-trif	151	3.525	3.526	-0.001	96	192254	5.00	4.93	
47 Acetone	43	3.542	3.544	-0.002	100	48722	20.0	20.0	
48 Iodomethane	142	3.682	3.683	-0.001	98	368649	5.00	5.19	
50 Carbon disulfide	76	3.769	3.753	0.016	99	588211	5.00	5.33	
52 3-Chloro-1-propene	41	3.856	3.857	-0.001	95	291553	5.00	5.26	
53 Methyl acetate	43	3.873	3.857	0.016	97	245205	25.0	26.0	
54 Methylene Chloride	84	3.995	3.979	0.016	99	179240	5.00	5.38	
55 2-Methyl-2-propanol	59	4.100	4.101	-0.001	96	57327	50.0	51.7	
57 Acrylonitrile	53	4.256	4.240	0.016	99	141109	50.0	52.4	
56 Methyl tert-butyl ether	73	4.274	4.275	-0.001	96	275140	5.00	5.23	
58 trans-1,2-Dichloroethene	96	4.274	4.275	-0.001	98	185649	5.00	5.31	
59 Hexane	57	4.552	4.536	0.016	92	270387	5.00	5.24	
60 1,1-Dichloroethane	63	4.744	4.728	0.016	96	329403	5.00	5.00	
61 Vinyl acetate	43	4.761	4.745	0.016	97	674054	10.0	9.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.406	5.390	0.016	84	190676	5.00	5.21	
67 2-Butanone (MEK)	43	5.406	5.407	-0.001	46	91975	20.0	19.7	
66 2,2-Dichloropropane	77	5.406	5.407	-0.001	90	273018	5.00	5.01	
71 sec-Butyl Alcohol	45	5.632	5.616	0.016	95	78161	75.0	79.1	
73 Chlorobromomethane	128	5.702	5.686	0.016	97	91430	5.00	5.40	
74 Tetrahydrofuran	42	5.754	5.738	0.016	67	33231	10.0	9.56	
75 Chloroform	83	5.772	5.756	0.016	96	306704	5.00	5.02	
76 1,1,1-Trichloroethane	97	6.015	6.017	-0.002	98	263782	5.00	5.05	
77 Cyclohexane	56	6.085	6.086	-0.001	91	302490	5.00	5.18	
78 1,1-Dichloropropene	75	6.207	6.191	0.016	98	266079	5.00	5.15	
79 Carbon tetrachloride	117	6.224	6.208	0.016	98	254083	5.00	5.15	
80 Isobutyl alcohol	41	6.329	6.330	-0.001	91	40963	125.0	122.3	
81 Benzene	78	6.468	6.452	0.016	96	543644	5.00	5.25	
82 1,2-Dichloroethane	62	6.486	6.470	0.016	93	119732	5.00	5.19	
84 n-Heptane	43	6.764	6.748	0.016	92	339883	5.00	5.49	
86 Trichloroethene	95	7.269	7.271	-0.002	98	222378	5.00	5.02	
88 2-Pentanone	43	7.513	7.497	0.016	98	232373	10.0	11.3	
89 Methylcyclohexane	55	7.531	7.532	-0.001	92	268628	5.00	5.37	
90 1,2-Dichloropropane	63	7.583	7.567	0.016	97	202455	5.00	5.07	
92 Dibromomethane	93	7.740	7.724	0.016	97	110617	5.00	5.32	
93 1,4-Dioxane	88	7.757	7.758	-0.001	30	11002	100.0	97.5	
94 Dichlorobromomethane	83	7.931	7.933	-0.002	99	271789	5.00	5.08	
96 2-Chloroethyl vinyl ether	63	8.332	8.333	-0.001	91	82527	5.00	5.29	
97 cis-1,3-Dichloropropene	75	8.541	8.542	-0.001	97	259239	5.00	5.31	
98 4-Methyl-2-pentanone (MIBK)	43	8.767	8.751	0.016	96	311178	20.0	21.0	
99 Toluene	91	9.011	9.012	-0.001	99	615591	5.00	5.30	
100 trans-1,3-Dichloropropene	75	9.324	9.326	-0.002	92	181239	5.00	5.27	
101 Ethyl methacrylate	69	9.446	9.448	-0.002	88	154560	5.00	5.41	
102 1,1,2-Trichloroethane	97	9.586	9.587	-0.001	90	126112	5.00	5.24	
103 Tetrachloroethene	164	9.812	9.796	0.016	97	225247	5.00	5.57	
104 1,3-Dichloropropane	76	9.847	9.831	0.016	88	192305	5.00	5.18	
105 2-Hexanone	43	9.969	9.953	0.016	96	208534	20.0	21.1	
108 Chlorodibromomethane	129	10.195	10.179	0.016	90	215371	5.00	5.28	
109 Ethylene Dibromide	107	10.387	10.371	0.016	98	160583	5.00	5.49	
110 1-Chlorohexane	91	11.153	11.155	-0.002	88	153648	2.50	2.57	
111 Chlorobenzene	112	11.205	11.189	0.016	95	453205	5.00	5.45	
112 1,1,1,2-Tetrachloroethane	131	11.327	11.311	0.016	97	208176	5.00	5.20	
113 Ethylbenzene	106	11.362	11.364	-0.002	99	219152	5.00	5.44	
114 m-Xylene & p-Xylene	106	11.554	11.538	0.016	99	306651	5.00	5.55	
115 o-Xylene	106	12.128	12.112	0.016	96	273234	5.00	5.47	
116 Styrene	104	12.146	12.130	0.016	95	436896	5.00	5.48	
117 Bromoform	173	12.390	12.391	-0.001	97	126504	5.00	5.43	
118 Isopropylbenzene	105	12.616	12.600	0.016	95	805830	5.00	5.05	
120 Cyclohexanone	55	12.738	12.722	0.016	88	81938	200.0	207.8	
122 Bromobenzene	156	12.999	12.983	0.016	92	220591	5.00	5.29	
121 1,1,2,2-Tetrachloroethane	83	12.982	12.983	-0.001	86	167845	5.00	4.83	
123 1,2,3-Trichloropropane	110	13.034	13.035	-0.001	77	36660	5.00	4.70	
124 trans-1,4-Dichloro-2-buten	53	13.069	13.053	0.016	69	32294	5.00	4.89	
125 N-Propylbenzene	120	13.121	13.105	0.016	99	205594	5.00	5.24	
126 2-Chlorotoluene	126	13.226	13.210	0.016	97	169574	5.00	5.15	
127 1,3,5-Trimethylbenzene	105	13.330	13.332	-0.002	96	598732	5.00	5.27	
128 4-Chlorotoluene	126	13.348	13.349	-0.001	98	203687	5.00	5.29	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.713	13.697	0.016	95	674396	5.00	5.12	
130 1,2,4-Trimethylbenzene	105	13.766	13.749	0.017	96	576601	5.00	5.23	
131 sec-Butylbenzene	134	13.957	13.941	0.016	93	178780	5.00	5.19	
132 1,3-Dichlorobenzene	146	14.079	14.063	0.016	97	349330	5.00	5.58	
133 4-Isopropyltoluene	119	14.114	14.098	0.016	98	770277	5.00	5.34	
134 1,4-Dichlorobenzene	146	14.166	14.167	-0.001	96	435922	5.00	5.10	
137 n-Butylbenzene	91	14.532	14.533	-0.001	97	704937	5.00	5.25	
138 1,2-Dichlorobenzene	146	14.567	14.551	0.016	97	324349	5.00	5.22	
139 1,2-Dibromo-3-Chloropropan	157	15.350	15.334	0.016	93	32364	5.00	4.95	
141 1,2,4-Trichlorobenzene	180	16.117	16.101	0.016	94	240128	5.00	5.38	
142 Hexachlorobutadiene	225	16.256	16.257	-0.001	97	220249	5.00	5.43	
143 Naphthalene	128	16.343	16.327	0.016	97	239863	5.00	5.18	
144 1,2,3-Trichlorobenzene	180	16.569	16.553	0.016	95	187867	5.00	5.48	
S 151 1,2-Dichloroethene, Total	96				0		10.0	10.5	
S 149 1,2-Dichloroethene, Total	1				0		10.0	10.5	
S 150 Xylenes, Total	106				0		10.0	11.0	
S 148 1,3-Dichloropropene, Total	1				0		10.0	10.6	
S 145 Trihalomethanes, Total	1				0		20.0	20.8	
S 146 Xylenes, Total (URS)	1				0		10.0	11.0	
S 147 Total BTEX	1				0			27.0	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 2.50	Units: uL
MV-Gas/Ket A_00052	Amount Added: 2.50	Units: uL
MV-2cleve+AVA_00018	Amount Added: 2.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.40	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1087.D

Injection Date: 02-Nov-2016 12:11:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 13

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

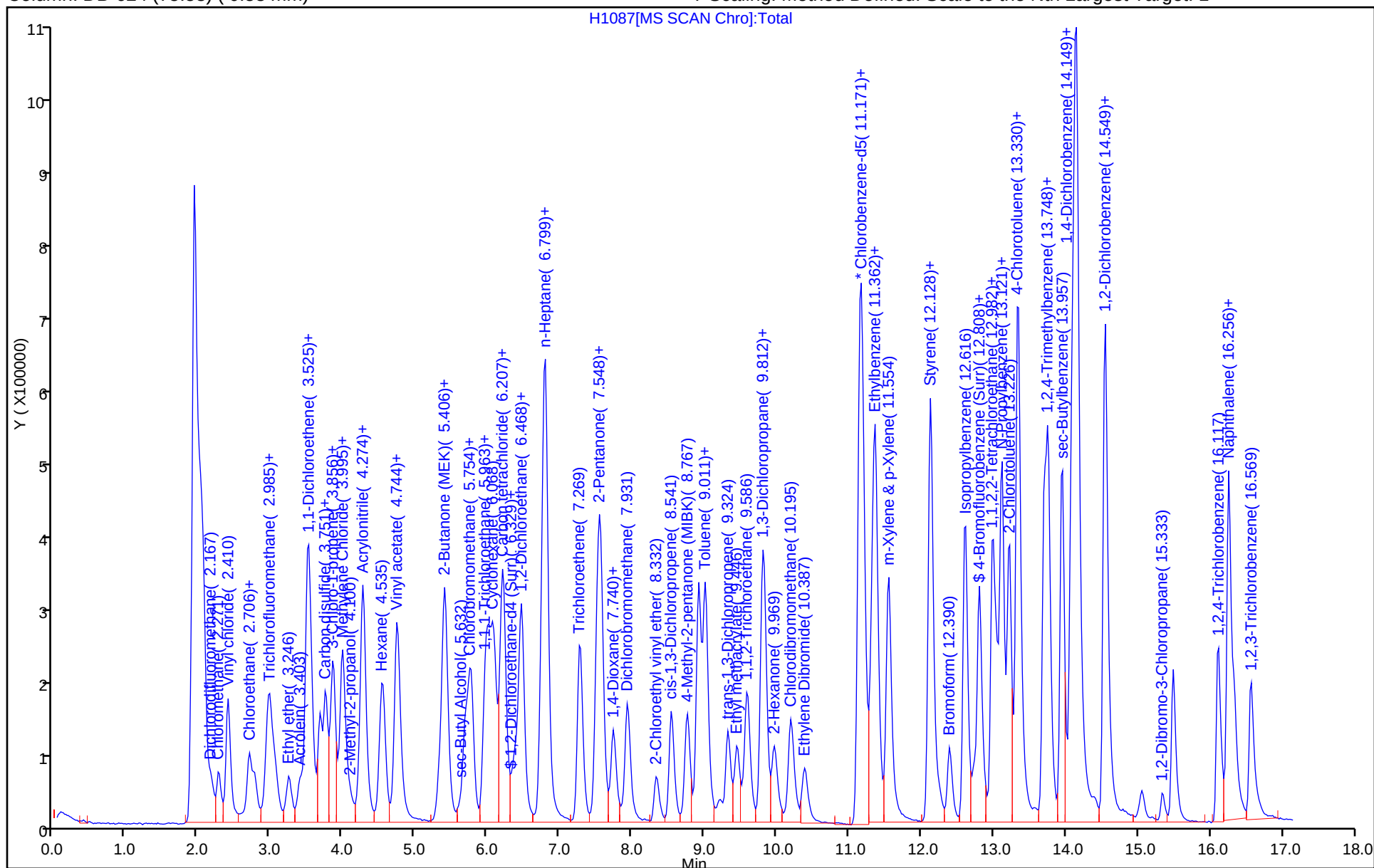
ALS Bottle#: 5

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1088.D
 Lims ID: icis
 Client ID:
 Sample Type: ICIS Calib Level: 5
 Inject. Date: 02-Nov-2016 12:35:30 ALS Bottle#: 6 Worklist Smp#: 14
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: icis
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:50:15 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.019	4.019	0.000	96	217375	250.0	250.0	
* 2 Fluorobenzene	96	6.805	6.805	0.000	99	1207728	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.159	11.159	0.000	86	274920	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.137	14.137	0.000	96	453339	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.969	5.969	0.000	94	545970	10.0	9.65	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.387	6.387	0.000	94	223767	10.0	9.67	
\$ 10 Toluene-d8 (Surr)	98	8.913	8.913	0.000	92	1208566	10.0	9.78	
\$ 11 4-Bromofluorobenzene (Surr	95	12.796	12.796	0.000	90	575266	10.0	9.30	
28 Dichlorodifluoromethane	85	2.173	2.173	0.000	100	393457	10.0	10.1	
30 Chloromethane	50	2.277	2.277	0.000	98	287351	10.0	9.74	
32 Vinyl chloride	62	2.416	2.416	0.000	98	315875	10.0	10.7	
35 Bromomethane	94	2.695	2.695	0.000	90	282744	10.0	10.7	
36 Chloroethane	64	2.782	2.782	0.000	99	209752	10.0	10.3	
37 Dichlorofluoromethane	67	2.956	2.956	0.000	99	711717	10.0	9.84	
38 Trichlorofluoromethane	101	3.026	3.026	0.000	100	513581	10.0	10.4	
40 Ethyl ether	59	3.252	3.252	0.000	96	174873	10.0	10.2	
44 Acrolein	56	3.392	3.392	0.000	99	254579	100.0	98.6	
45 1,1-Dichloroethene	96	3.514	3.514	0.000	98	324978	10.0	10.5	
46 1,1,2-Trichloro-1,2,2-trif	151	3.531	3.531	0.000	97	407276	10.0	10.4	
47 Acetone	43	3.548	3.548	0.000	100	90202	40.0	37.0	
48 Iodomethane	142	3.688	3.688	0.000	98	760494	10.0	10.7	
50 Carbon disulfide	76	3.757	3.757	0.000	99	1235691	10.0	11.2	
52 3-Chloro-1-propene	41	3.862	3.862	0.000	93	572088	10.0	10.3	
53 Methyl acetate	43	3.862	3.862	0.000	97	478261	50.0	50.7	
54 Methylene Chloride	84	3.984	3.984	0.000	99	332976	10.0	10.0	
55 2-Methyl-2-propanol	59	4.106	4.106	0.000	93	106048	100.0	98.1	
57 Acrylonitrile	53	4.245	4.245	0.000	100	263115	100.0	97.7	
56 Methyl tert-butyl ether	73	4.280	4.280	0.000	97	523378	10.0	9.96	
58 trans-1,2-Dichloroethene	96	4.280	4.280	0.000	98	366168	10.0	10.5	
59 Hexane	57	4.541	4.541	0.000	92	573485	10.0	11.4	
60 1,1-Dichloroethane	63	4.733	4.733	0.000	96	655418	10.0	9.95	
61 Vinyl acetate	43	4.750	4.750	0.000	97	1440670	20.0	21.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.395	5.395	0.000	84	375575	10.0	10.3	
67 2-Butanone (MEK)	43	5.395	5.395	0.000	44	187045	40.0	40.1	
66 2,2-Dichloropropane	77	5.412	5.412	0.000	91	494258	10.0	9.87	
71 sec-Butyl Alcohol	45	5.621	5.621	0.000	95	134439	150.0	139.7	
73 Chlorobromomethane	128	5.691	5.691	0.000	97	178715	10.0	10.6	
74 Tetrahydrofuran	42	5.760	5.760	0.000	90	62932	20.0	18.1	
75 Chloroform	83	5.760	5.760	0.000	95	612648	10.0	10.0	
76 1,1,1-Trichloroethane	97	6.022	6.022	0.000	98	528254	10.0	10.1	
77 Cyclohexane	56	6.091	6.091	0.000	90	606459	10.0	10.4	
78 1,1-Dichloropropene	75	6.196	6.196	0.000	98	533523	10.0	10.3	
79 Carbon tetrachloride	117	6.213	6.213	0.000	99	510146	10.0	10.3	
80 Isobutyl alcohol	41	6.335	6.335	0.000	94	84007	250.0	257.5	
81 Benzene	78	6.457	6.457	0.000	97	1081285	10.0	10.5	
82 1,2-Dichloroethane	62	6.474	6.474	0.000	94	236704	10.0	10.3	
84 n-Heptane	43	6.753	6.753	0.000	93	686080	10.0	11.1	
86 Trichloroethene	95	7.275	7.275	0.000	98	439419	10.0	9.93	
88 2-Pentanone	43	7.502	7.502	0.000	98	355823	20.0	17.3	
89 Methylcyclohexane	55	7.537	7.537	0.000	93	537110	10.0	10.7	
90 1,2-Dichloropropane	63	7.572	7.572	0.000	96	384586	10.0	9.64	
92 Dibromomethane	93	7.728	7.728	0.000	98	210155	10.0	10.1	
93 1,4-Dioxane	88	7.746	7.746	0.000	30	23644	200.0	196.3	
94 Dichlorobromomethane	83	7.937	7.937	0.000	99	528552	10.0	9.88	
96 2-Chloroethyl vinyl ether	63	8.338	8.338	0.000	91	152467	10.0	8.99	
97 cis-1,3-Dichloropropene	75	8.547	8.547	0.000	97	495559	10.0	10.4	
98 4-Methyl-2-pentanone (MIBK)	43	8.756	8.756	0.000	96	583633	40.0	39.5	
99 Toluene	91	9.017	9.017	0.000	99	1191626	10.0	10.3	
100 trans-1,3-Dichloropropene	75	9.331	9.331	0.000	92	344643	10.0	10.0	
101 Ethyl methacrylate	69	9.452	9.452	0.000	88	288913	10.0	10.4	
102 1,1,2-Trichloroethane	97	9.592	9.592	0.000	90	241718	10.0	10.2	
103 Tetrachloroethene	164	9.801	9.801	0.000	98	427737	10.0	10.8	
104 1,3-Dichloropropane	76	9.836	9.836	0.000	90	374465	10.0	10.3	
105 2-Hexanone	43	9.975	9.975	0.000	96	388265	40.0	39.9	
108 Chlorodibromomethane	129	10.201	10.201	0.000	90	424638	10.0	10.7	
109 Ethylene Dibromide	107	10.376	10.376	0.000	99	301802	10.0	10.6	
110 1-Chlorohexane	91	11.159	11.159	0.000	96	286101	5.00	4.90	
111 Chlorobenzene	112	11.194	11.194	0.000	95	861643	10.0	10.6	
112 1,1,1,2-Tetrachloroethane	131	11.333	11.333	0.000	98	396900	10.0	10.2	
113 Ethylbenzene	106	11.368	11.368	0.000	99	415756	10.0	10.6	
114 m-Xylene & p-Xylene	106	11.542	11.542	0.000	100	557412	10.0	10.3	
115 o-Xylene	106	12.117	12.117	0.000	96	516211	10.0	10.6	
116 Styrene	104	12.135	12.135	0.000	94	823497	10.0	10.6	
117 Bromoform	173	12.396	12.396	0.000	97	241316	10.0	10.6	
118 Isopropylbenzene	105	12.605	12.605	0.000	95	1500356	10.0	9.98	
120 Cyclohexanone	55	12.744	12.744	0.000	89	157877	400.0	410.4	
122 Bromobenzene	156	12.988	12.988	0.000	93	403892	10.0	10.3	
121 1,1,2,2-Tetrachloroethane	83	12.988	12.988	0.000	90	318108	10.0	9.71	
123 1,2,3-Trichloropropane	110	13.040	13.040	0.000	79	69558	10.0	9.47	
124 trans-1,4-Dichloro-2-buten	53	13.058	13.058	0.000	75	60786	10.0	9.77	
125 N-Propylbenzene	120	13.110	13.110	0.000	99	370128	10.0	10.0	
126 2-Chlorotoluene	126	13.214	13.214	0.000	98	318401	10.0	10.3	
127 1,3,5-Trimethylbenzene	105	13.336	13.336	0.000	96	1082665	10.0	10.1	
128 4-Chlorotoluene	126	13.354	13.354	0.000	98	365968	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.702	13.702	0.000	95	1232528	10.0	9.93	
130 1,2,4-Trimethylbenzene	105	13.754	13.754	0.000	95	1053171	10.0	10.1	
131 sec-Butylbenzene	134	13.946	13.946	0.000	94	324038	10.0	9.98	
132 1,3-Dichlorobenzene	146	14.068	14.068	0.000	97	583244	10.0	9.88	
133 4-Isopropyltoluene	119	14.103	14.103	0.000	98	1375120	10.0	10.1	
134 1,4-Dichlorobenzene	146	14.172	14.172	0.000	94	819785	10.0	10.2	
137 n-Butylbenzene	91	14.538	14.538	0.000	97	1247306	10.0	9.86	
138 1,2-Dichlorobenzene	146	14.555	14.555	0.000	97	594150	10.0	10.1	
139 1,2-Dibromo-3-Chloropropan	157	15.339	15.339	0.000	92	59838	10.0	9.60	
141 1,2,4-Trichlorobenzene	180	16.105	16.105	0.000	94	424349	10.0	10.1	
142 Hexachlorobutadiene	225	16.262	16.262	0.000	97	373099	10.0	9.76	
143 Naphthalene	128	16.332	16.332	0.000	97	437996	10.0	10.0	
144 1,2,3-Trichlorobenzene	180	16.558	16.558	0.000	96	331474	10.0	10.3	
S 151 1,2-Dichloroethene, Total	96				0		20.0	20.7	
S 149 1,2-Dichloroethene, Total	1				0		20.0	20.7	
S 150 Xylenes, Total	106				0		20.0	20.9	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.4	
S 145 Trihalomethanes, Total	1				0		40.0	41.2	
S 146 Xylenes, Total (URS)	1				0		20.0	20.9	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 5.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1088.D

Injection Date: 02-Nov-2016 12:35:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ics

Worklist Smp#: 14

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

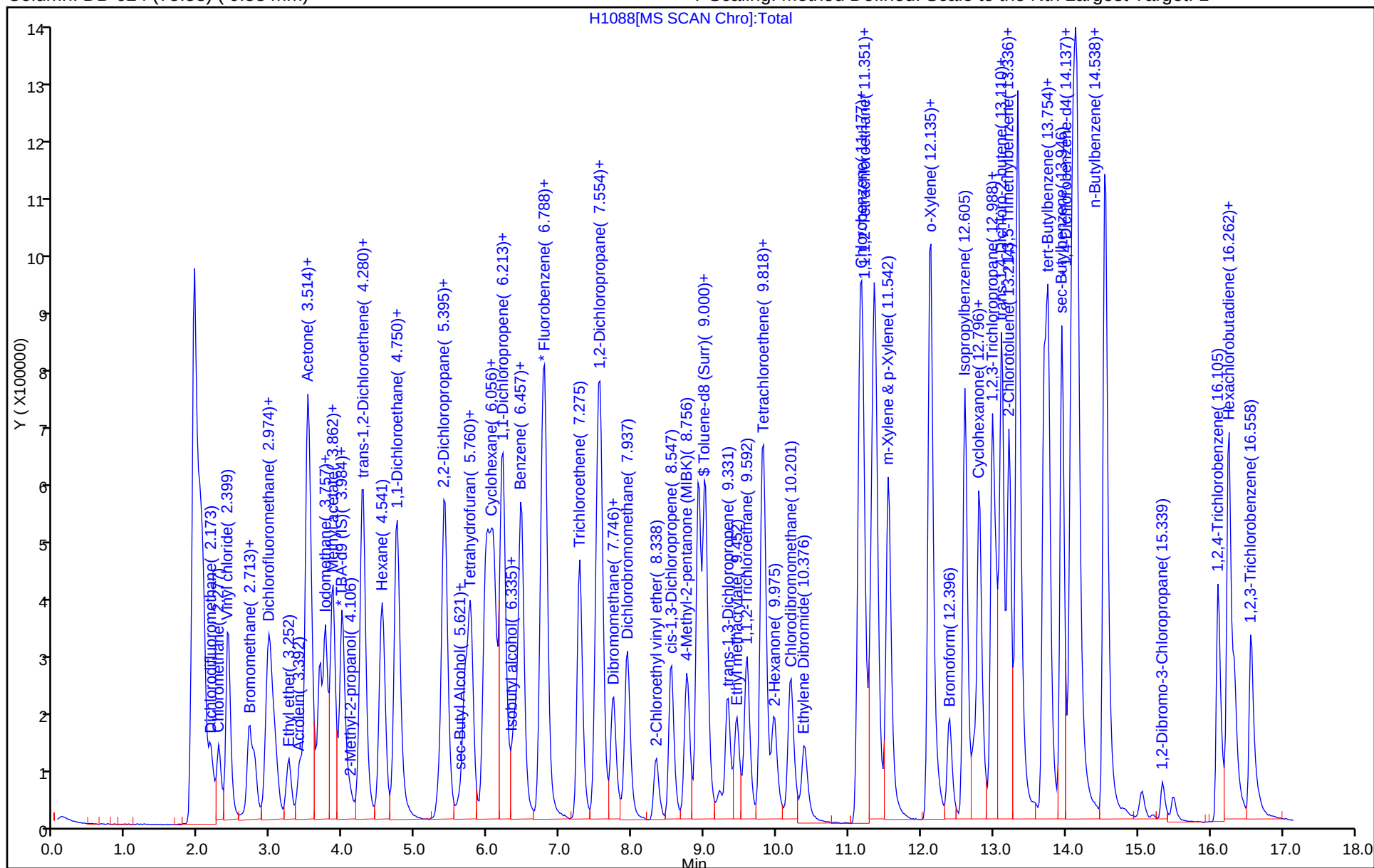
ALS Bottle#: 6

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1089.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 02-Nov-2016 12:59:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:50:20 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.013	4.019	-0.006	95	223757	250.0	250.0	
* 2 Fluorobenzene	96	6.800	6.805	-0.005	99	1190688	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.136	11.159	-0.023	86	267424	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.149	14.137	0.012	96	405610	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.964	5.969	-0.005	94	1588716	30.0	28.5	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.382	6.387	-0.005	96	677395	30.0	29.7	
\$ 10 Toluene-d8 (Surr)	98	8.907	8.913	-0.006	92	3451323	30.0	28.7	
\$ 11 4-Bromofluorobenzene (Surr	95	12.791	12.796	-0.005	88	1631797	30.0	29.5	
28 Dichlorodifluoromethane	85	2.167	2.173	-0.006	98	1193575	30.0	30.7	
30 Chloromethane	50	2.289	2.277	0.012	98	883600	30.0	30.1	
32 Vinyl chloride	62	2.411	2.416	-0.005	98	973852	30.0	33.4	
35 Bromomethane	94	2.689	2.695	-0.006	90	840473	30.0	32.3	
36 Chloroethane	64	2.759	2.782	-0.023	99	625405	30.0	31.1	
37 Dichlorofluoromethane	67	2.951	2.956	-0.005	99	2180348	30.0	30.6	
38 Trichlorofluoromethane	101	3.003	3.026	-0.023	100	1544826	30.0	31.7	
40 Ethyl ether	59	3.247	3.252	-0.005	96	536048	30.0	31.7	
44 Acrolein	56	3.386	3.392	-0.006	98	796141	300.0	312.8	
45 1,1-Dichloroethene	96	3.491	3.514	-0.023	96	965264	30.0	31.5	
46 1,1,2-Trichloro-1,2,2-trif	151	3.525	3.531	-0.006	96	1201891	30.0	31.2	
47 Acetone	43	3.543	3.548	-0.005	100	307691	120.0	128.0	
48 Iodomethane	142	3.665	3.688	-0.023	98	2283820	30.0	32.6	
50 Carbon disulfide	76	3.752	3.757	-0.005	99	3714575	30.0	34.2	
52 3-Chloro-1-propene	41	3.839	3.862	-0.023	91	1716412	30.0	31.4	
53 Methyl acetate	43	3.856	3.862	-0.006	98	1584521	150.0	170.5	
54 Methylene Chloride	84	3.978	3.984	-0.006	99	941261	30.0	28.7	
55 2-Methyl-2-propanol	59	4.100	4.106	-0.006	96	333034	300.0	299.3	
57 Acrylonitrile	53	4.239	4.245	-0.006	99	844169	300.0	318.0	
56 Methyl tert-butyl ether	73	4.274	4.280	-0.006	89	1586366	30.0	30.6	
58 trans-1,2-Dichloroethene	96	4.274	4.280	-0.006	98	1074570	30.0	31.2	
59 Hexane	57	4.536	4.541	-0.005	92	1699832	30.0	34.7	
60 1,1-Dichloroethane	63	4.727	4.733	-0.006	96	1995332	30.0	30.7	
61 Vinyl acetate	43	4.744	4.750	-0.006	97	4300050	60.0	64.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.389	5.395	-0.006	84	1125446	30.0	31.2	
67 2-Butanone (MEK)	43	5.389	5.395	-0.006	99	564758	120.0	122.8	
66 2,2-Dichloropropane	77	5.406	5.412	-0.006	92	1391242	30.0	30.0	
71 sec-Butyl Alcohol	45	5.615	5.621	-0.006	95	440984	450.0	445.3	
73 Chlorobromomethane	128	5.685	5.691	-0.006	97	538490	30.0	32.3	
74 Tetrahydrofuran	42	5.737	5.760	-0.023	95	194477	60.0	56.8	
75 Chloroform	83	5.755	5.760	-0.005	96	1843926	30.0	30.6	
76 1,1,1-Trichloroethane	97	6.016	6.022	-0.006	98	1600631	30.0	31.1	
77 Cyclohexane	56	6.086	6.091	-0.005	91	1833142	30.0	31.8	
78 1,1-Dichloropropene	75	6.190	6.196	-0.006	97	1610541	30.0	31.6	
79 Carbon tetrachloride	117	6.207	6.213	-0.006	98	1546511	30.0	31.8	
80 Isobutyl alcohol	41	6.329	6.335	-0.006	94	267391	750.0	796.4	
81 Benzene	78	6.451	6.457	-0.006	97	3255433	30.0	31.9	
82 1,2-Dichloroethane	62	6.469	6.474	-0.005	94	735222	30.0	32.3	
84 n-Heptane	43	6.747	6.753	-0.006	93	2085606	30.0	34.2	
86 Trichloroethene	95	7.270	7.275	-0.005	98	1335492	30.0	30.6	
88 2-Pentanone	43	7.496	7.502	-0.006	98	1231530	60.0	60.8	
89 Methylcyclohexane	55	7.531	7.537	-0.006	93	1641869	30.0	33.3	
90 1,2-Dichloropropane	63	7.566	7.572	-0.006	97	1172837	30.0	29.8	
92 Dibromomethane	93	7.723	7.728	-0.005	98	637508	30.0	31.1	
93 1,4-Dioxane	88	7.757	7.746	0.011	69	75496	600.0	609.7	
94 Dichlorobromomethane	83	7.932	7.937	-0.005	99	1637493	30.0	31.0	
96 2-Chloroethyl vinyl ether	63	8.332	8.338	-0.006	92	595269	30.0	30.4	
97 cis-1,3-Dichloropropene	75	8.541	8.547	-0.006	96	1514008	30.0	32.7	
98 4-Methyl-2-pentanone (MIBK)	43	8.750	8.756	-0.006	96	1894453	120.0	130.0	
99 Toluene	91	9.011	9.017	-0.006	99	3531922	30.0	30.9	
100 trans-1,3-Dichloropropene	75	9.307	9.331	-0.024	93	1047385	30.0	30.9	
101 Ethyl methacrylate	69	9.447	9.452	-0.005	89	875835	30.0	32.3	
102 1,1,2-Trichloroethane	97	9.586	9.592	-0.006	89	713609	30.0	30.9	
103 Tetrachloroethene	164	9.795	9.801	-0.006	98	1233161	30.0	32.1	
104 1,3-Dichloropropane	76	9.830	9.836	-0.006	89	1122287	30.0	31.8	
105 2-Hexanone	43	9.952	9.975	-0.023	96	1214260	120.0	127.6	
108 Chlorodibromomethane	129	10.178	10.201	-0.023	90	1241612	30.0	32.1	
109 Ethylene Dibromide	107	10.370	10.376	-0.006	98	931602	30.0	33.5	
110 1-Chlorohexane	91	11.154	11.159	-0.005	97	843580	15.0	14.9	
111 Chlorobenzene	112	11.188	11.194	-0.006	93	2505196	30.0	31.8	
112 1,1,1,2-Tetrachloroethane	131	11.328	11.333	-0.005	99	1160971	30.0	30.6	
113 Ethylbenzene	106	11.363	11.368	-0.005	99	1200346	30.0	31.4	
114 m-Xylene & p-Xylene	106	11.537	11.542	-0.005	100	1659850	30.0	31.6	
115 o-Xylene	106	12.111	12.117	-0.006	94	1504148	30.0	31.7	
116 Styrene	104	12.129	12.135	-0.006	92	2402287	30.0	31.8	
117 Bromoform	173	12.390	12.396	-0.006	97	716442	30.0	32.4	
118 Isopropylbenzene	105	12.599	12.605	-0.006	95	4355308	30.0	32.4	
120 Cyclohexanone	55	12.738	12.744	-0.006	89	483061	1200.0	1290.9	
122 Bromobenzene	156	12.982	12.988	-0.006	96	1159888	30.0	33.0	
121 1,1,2,2-Tetrachloroethane	83	12.982	12.988	-0.006	94	925126	30.0	31.5	
123 1,2,3-Trichloropropane	110	13.034	13.040	-0.006	80	199425	30.0	30.3	
124 trans-1,4-Dichloro-2-buten	53	13.052	13.058	-0.006	66	178152	30.0	32.0	
125 N-Propylbenzene	120	13.122	13.110	0.012	99	1047181	30.0	31.7	
126 2-Chlorotoluene	126	13.209	13.214	-0.005	98	901392	30.0	32.5	
127 1,3,5-Trimethylbenzene	105	13.331	13.336	-0.005	95	3138211	30.0	32.7	
128 4-Chlorotoluene	126	13.348	13.354	-0.006	98	1033955	30.0	31.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.696	13.702	-0.006	95	3477945	30.0	31.3	
130 1,2,4-Trimethylbenzene	105	13.749	13.754	-0.005	96	2973273	30.0	32.0	
131 sec-Butylbenzene	134	13.940	13.946	-0.006	94	892089	30.0	30.7	
132 1,3-Dichlorobenzene	146	14.062	14.068	-0.006	97	1603561	30.0	30.4	
133 4-Isopropyltoluene	119	14.097	14.103	-0.006	98	3824517	30.0	31.4	
134 1,4-Dichlorobenzene	146	14.167	14.172	-0.006	95	2287522	30.0	31.8	
137 n-Butylbenzene	91	14.532	14.538	-0.006	98	3643156	30.0	32.2	
138 1,2-Dichlorobenzene	146	14.550	14.555	-0.005	97	1646287	30.0	31.4	
139 1,2-Dibromo-3-Chloropropan	157	15.333	15.339	-0.006	92	180178	30.0	32.1	
141 1,2,4-Trichlorobenzene	180	16.100	16.105	-0.005	94	1273569	30.0	33.8	
142 Hexachlorobutadiene	225	16.256	16.262	-0.006	97	1033466	30.0	30.2	
143 Naphthalene	128	16.326	16.332	-0.006	97	1324814	30.0	33.9	
144 1,2,3-Trichlorobenzene	180	16.552	16.558	-0.006	95	972341	30.0	33.6	
S 151 1,2-Dichloroethene, Total	96				0		60.0	62.4	
S 149 1,2-Dichloroethene, Total	1				0		60.0	62.4	
S 150 Xylenes, Total	106				0		60.0	63.4	
S 148 1,3-Dichloropropene, Total	1				0		60.0	63.6	
S 145 Trihalomethanes, Total	1				0		120.0	126.2	
S 146 Xylenes, Total (URS)	1				0		60.0	63.4	
S 147 Total BTEX	1				0			157.5	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 15.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 15.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 15.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 2.40	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1089.D

Injection Date: 02-Nov-2016 12:59:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 15

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

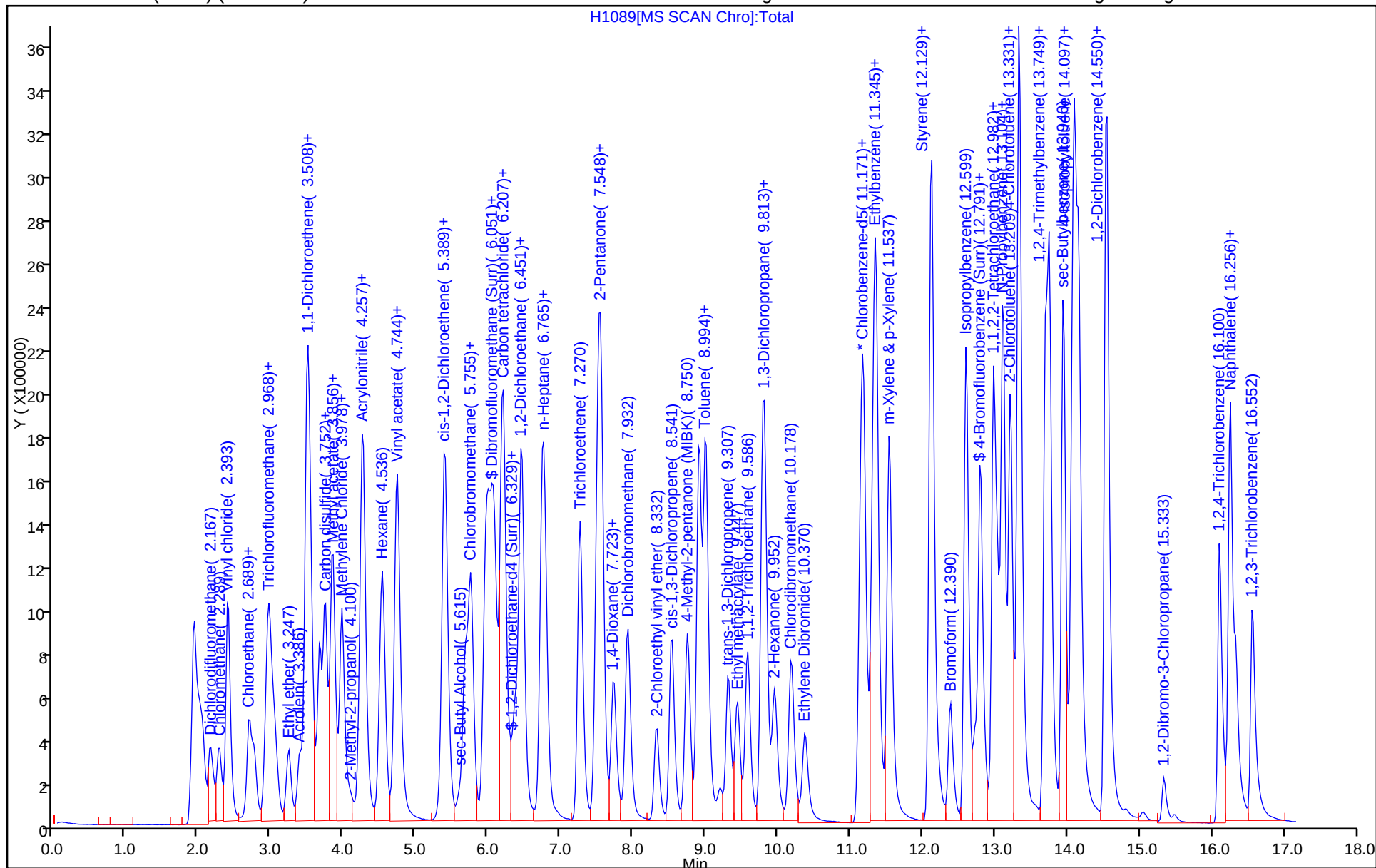
ALS Bottle#: 7

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Lims ID: ic
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 02-Nov-2016 13:22:30 ALS Bottle#: 8 Worklist Smp#: 16
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ic
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:50:24 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.031	4.019	0.012	95	220930	250.0	250.0	
* 2 Fluorobenzene	96	6.800	6.805	-0.005	98	1108121	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.136	11.159	-0.023	87	253609	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.132	14.137	-0.005	92	343088	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.964	5.969	-0.005	94	2977702	60.0	57.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.382	6.387	-0.005	97	1303396	60.0	61.4	
\$ 10 Toluene-d8 (Surr)	98	8.907	8.913	-0.006	92	6139561	60.0	53.9	
\$ 11 4-Bromofluorobenzene (Surr	95	12.791	12.796	-0.005	91	2819541	60.0	60.3	
28 Dichlorodifluoromethane	85	2.167	2.173	-0.006	99	2215371	60.0	61.0	
30 Chloromethane	50	2.289	2.277	0.012	98	1674118	60.0	61.2	
32 Vinyl chloride	62	2.428	2.416	0.012	98	1776819	60.0	65.5	
35 Bromomethane	94	2.707	2.695	0.012	90	1461659	60.0	60.4	
36 Chloroethane	64	2.777	2.782	-0.005	100	1088164	60.0	58.1	
37 Dichlorofluoromethane	67	2.968	2.956	0.012	99	4048138	60.0	61.0	
38 Trichlorofluoromethane	101	3.021	3.026	-0.005	99	2892360	60.0	63.7	
40 Ethyl ether	59	3.247	3.252	-0.005	96	1014078	60.0	64.5	
44 Acrolein	56	3.404	3.392	0.012	98	1573466	599.9	664.3	
45 1,1-Dichloroethene	96	3.491	3.514	-0.023	96	1755185	60.0	61.6	
46 1,1,2-Trichloro-1,2,2-trif	151	3.526	3.531	-0.005	97	2192208	60.0	61.2	
47 Acetone	43	3.543	3.548	-0.005	100	536620	240.0	239.9	
48 Iodomethane	142	3.682	3.688	-0.006	99	4305302	60.0	66.1	
50 Carbon disulfide	76	3.752	3.757	-0.005	99	6779879	60.0	67.0	
53 Methyl acetate	43	3.857	3.862	-0.006	98	2865672	300.0	331.4	
52 3-Chloro-1-propene	41	3.857	3.862	-0.006	86	3169047	60.0	62.3	
54 Methylene Chloride	84	3.978	3.984	-0.006	99	1756161	60.0	57.5	
55 2-Methyl-2-propanol	59	4.118	4.106	0.012	98	608872	600.0	554.2	
57 Acrylonitrile	53	4.240	4.245	-0.005	99	1640582	600.0	664.1	
56 Methyl tert-butyl ether	73	4.274	4.280	-0.006	98	3050426	60.0	63.3	
58 trans-1,2-Dichloroethene	96	4.274	4.280	-0.006	98	1989289	60.0	62.0	
59 Hexane	57	4.536	4.541	-0.005	92	3097132	60.0	66.6	
60 1,1-Dichloroethane	63	4.727	4.733	-0.006	96	3786323	60.0	62.6	
61 Vinyl acetate	43	4.762	4.750	0.012	97	8503080	120.0	136.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.389	5.395	-0.006	85	2090770	60.0	62.3	
67 2-Butanone (MEK)	43	5.407	5.395	0.012	48	1083789	240.0	253.2	
66 2,2-Dichloropropane	77	5.407	5.412	-0.005	91	2548114	60.0	60.0	
71 sec-Butyl Alcohol	45	5.616	5.621	-0.005	95	866531	900.0	886.2	
73 Chlorobromomethane	128	5.685	5.691	-0.006	97	1014700	60.0	65.3	
74 Tetrahydrofuran	42	5.755	5.760	-0.005	95	374415	120.0	117.5	
75 Chloroform	83	5.772	5.760	0.012	96	3468835	60.0	61.9	
76 1,1,1-Trichloroethane	97	6.016	6.022	-0.006	97	2953441	60.0	61.7	
77 Cyclohexane	56	6.086	6.091	-0.005	90	3225883	60.0	60.2	
78 1,1-Dichloropropene	75	6.190	6.196	-0.006	96	2866460	60.0	60.5	
79 Carbon tetrachloride	117	6.208	6.213	-0.005	98	2864657	60.0	63.3	
80 Isobutyl alcohol	41	6.330	6.335	-0.005	94	526467	1500.0	1588.1	
81 Benzene	78	6.451	6.457	-0.006	97	5958042	60.0	62.8	
82 1,2-Dichloroethane	62	6.469	6.474	-0.005	95	1408482	60.0	66.5	
84 n-Heptane	43	6.748	6.753	-0.005	93	3626748	60.0	63.9	
86 Trichloroethene	95	7.270	7.275	-0.005	99	2366908	60.0	58.3	
88 2-Pentanone	43	7.496	7.502	-0.006	98	2114889	120.0	112.2	
89 Methylcyclohexane	55	7.531	7.537	-0.006	93	2808763	60.0	61.3	
90 1,2-Dichloropropane	63	7.566	7.572	-0.006	97	2145233	60.0	58.6	
92 Dibromomethane	93	7.723	7.728	-0.005	97	1191251	60.0	62.5	
93 1,4-Dioxane	88	7.758	7.746	0.012	46	146041	1200.0	1254.8	
94 Dichlorobromomethane	83	7.932	7.937	-0.005	99	3035779	60.0	61.8	
96 2-Chloroethyl vinyl ether	63	8.315	8.338	-0.023	92	1245097	60.0	59.9	
97 cis-1,3-Dichloropropene	75	8.541	8.547	-0.006	96	2784143	60.0	63.4	
98 4-Methyl-2-pentanone (MIBK)	43	8.750	8.756	-0.006	96	3532866	240.0	260.5	
99 Toluene	91	9.012	9.017	-0.005	99	6117231	60.0	57.5	
100 trans-1,3-Dichloropropene	75	9.308	9.331	-0.023	93	1918245	60.0	60.9	
101 Ethyl methacrylate	69	9.447	9.452	-0.005	90	1632703	60.0	63.5	
102 1,1,2-Trichloroethane	97	9.586	9.592	-0.006	90	1267516	60.0	59.1	
103 Tetrachloroethene	164	9.795	9.801	-0.006	99	2051737	60.0	56.3	
104 1,3-Dichloropropane	76	9.830	9.836	-0.006	90	2027895	60.0	60.7	
105 2-Hexanone	43	9.952	9.975	-0.023	96	2323803	240.0	257.1	
108 Chlorodibromomethane	129	10.178	10.201	-0.023	90	2300224	60.0	62.7	
109 Ethylene Dibromide	107	10.370	10.376	-0.006	99	1708434	60.0	64.8	
110 1-Chlorohexane	91	11.154	11.159	-0.005	97	1373204	30.0	25.5	
111 Chlorobenzene	112	11.189	11.194	-0.005	93	4360578	60.0	58.3	
112 1,1,1,2-Tetrachloroethane	131	11.328	11.333	-0.005	99	2089817	60.0	58.1	
113 Ethylbenzene	106	11.363	11.368	-0.005	99	2009592	60.0	55.4	
114 m-Xylene & p-Xylene	106	11.537	11.542	-0.005	100	2733708	60.0	55.0	
115 o-Xylene	106	12.112	12.117	-0.005	94	2542322	60.0	56.5	
116 Styrene	104	12.129	12.135	-0.006	92	4072808	60.0	56.8	
117 Bromoform	173	12.390	12.396	-0.006	96	1297466	60.0	61.9	
118 Isopropylbenzene	105	12.599	12.605	-0.006	95	7096679	60.0	62.4	
120 Cyclohexanone	55	12.739	12.744	-0.005	90	903943	2400.0	2547.2	
122 Bromobenzene	156	12.982	12.988	-0.006	94	1951142	60.0	65.6	
121 1,1,2,2-Tetrachloroethane	83	12.982	12.988	-0.006	75	1622209	60.0	65.4	
123 1,2,3-Trichloropropane	110	13.035	13.040	-0.005	80	356018	60.0	64.0	
124 trans-1,4-Dichloro-2-buten	53	13.052	13.058	-0.006	70	322417	60.0	68.5	
125 N-Propylbenzene	120	13.122	13.110	0.012	99	1647672	60.0	58.9	
126 2-Chlorotoluene	126	13.209	13.214	-0.005	98	1473339	60.0	62.7	
127 1,3,5-Trimethylbenzene	105	13.331	13.336	-0.005	95	4967543	60.0	61.3	
128 4-Chlorotoluene	126	13.348	13.354	-0.006	99	1635722	60.0	59.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.697	13.702	-0.006	94	5542525	60.0	59.0	
130 1,2,4-Trimethylbenzene	105	13.749	13.754	-0.005	96	4783891	60.0	60.9	
131 sec-Butylbenzene	134	13.940	13.946	-0.006	94	1372799	60.0	55.9	
132 1,3-Dichlorobenzene	146	14.062	14.068	-0.006	97	2649080	60.0	59.3	
133 4-Isopropyltoluene	119	14.097	14.103	-0.006	98	5854503	60.0	56.9	
134 1,4-Dichlorobenzene	146	14.167	14.172	-0.005	95	3622799	60.0	59.5	
137 n-Butylbenzene	91	14.532	14.538	-0.006	98	5607439	60.0	58.5	
138 1,2-Dichlorobenzene	146	14.550	14.555	-0.005	96	2729963	60.0	61.6	
139 1,2-Dibromo-3-Chloropropan	157	15.334	15.339	-0.005	92	324483	60.0	68.1	
141 1,2,4-Trichlorobenzene	180	16.100	16.105	-0.005	94	2037125	60.0	64.0	
142 Hexachlorobutadiene	225	16.257	16.262	-0.005	97	1487556	60.0	51.4	
143 Naphthalene	128	16.326	16.332	-0.006	97	2232785	60.0	67.6	
144 1,2,3-Trichlorobenzene	180	16.553	16.558	-0.005	95	1564775	60.0	63.9	
S 151 1,2-Dichloroethene, Total	96				0		120.0	124.3	
S 149 1,2-Dichloroethene, Total	1				0		120.0	124.3	
S 150 Xylenes, Total	106				0		120.0	111.5	
S 148 1,3-Dichloropropene, Total	1				0		120.0	124.2	
S 145 Trihalomethanes, Total	1				0		240.0	248.3	
S 146 Xylenes, Total (URS)	1				0		120.0	111.5	
S 147 Total BTEX	1				0			287.1	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 30.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 30.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 30.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 4.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D

Injection Date: 02-Nov-2016 13:22:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ic

Worklist Smp#: 16

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

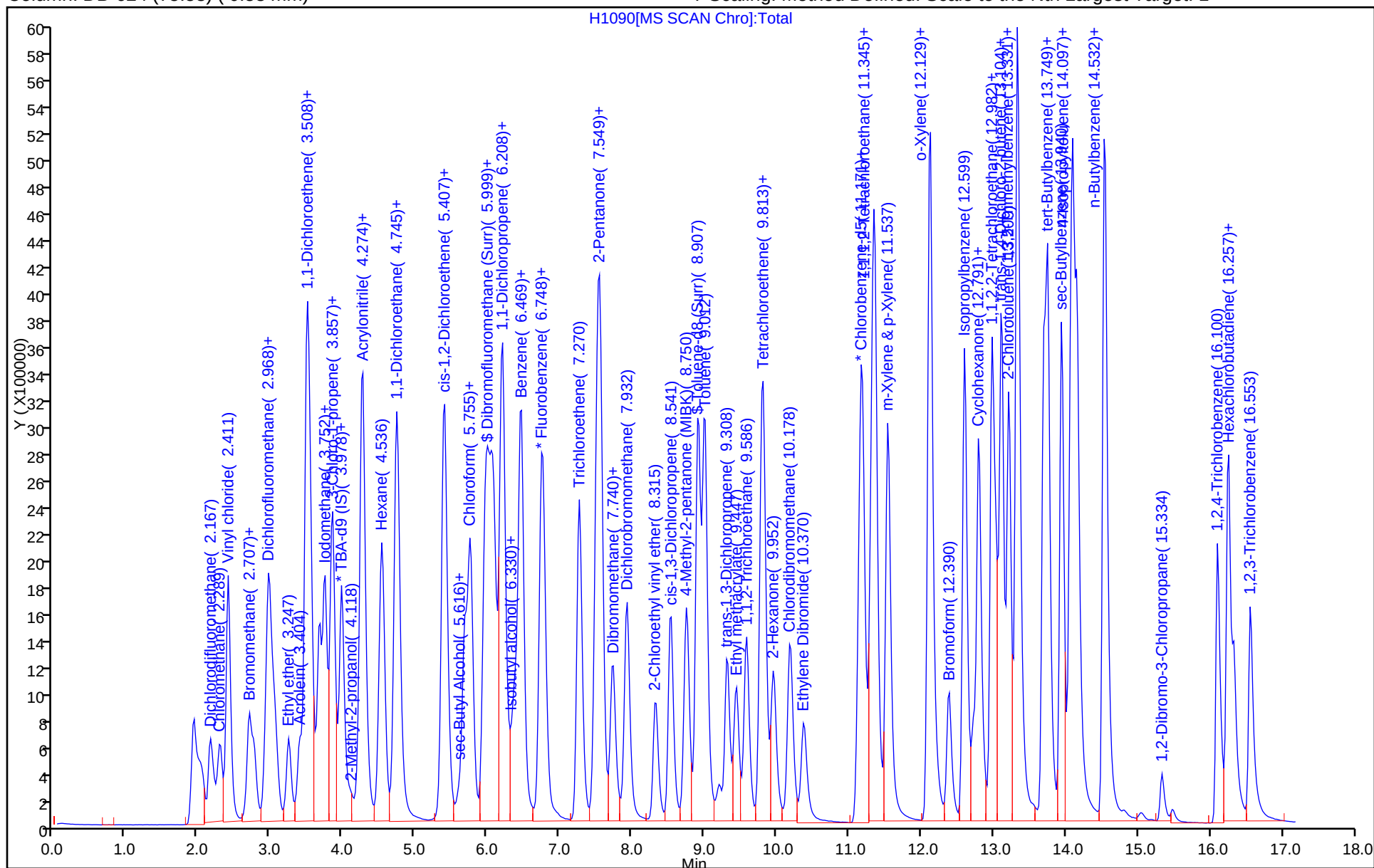
ALS Bottle#: 8

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 341836

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/13/2016 12:16 Calibration End Date: 09/13/2016 13:53 Calibration ID: 26995

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-341836/21	P1846.D
Level 2	STD020 280-341836/22	P1847.D
Level 3	STD050 280-341836/23	P1848.D
Level 4	ICIS 280-341836/24	P1849.D
Level 5	STD30 280-341836/25	P1850.D
Level 6	STD60 280-341836/26	P1851.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Ethanol	+++++ 0.2189	0.1711	0.2182	0.2380	0.2355	Ave		0.2164				12.4		15.0			
Isopropyl alcohol	1.2477 1.1405	1.3547	1.2520	1.5775	1.2313	Ave		1.3006				11.7		15.0			
Acetonitrile	0.0159 0.0130	0.0096	0.0146	0.0145	0.0136	Lin1	0.0079	0.0133							0.9960		0.9900
Isopropyl ether	0.1827 0.1928	0.1776	0.1947	0.2153	0.2061	Ave		0.1949				7.2		15.0			
2-Chloro-1,3-butadiene	0.6456 0.6291	0.6189	0.5598	0.7082	0.7225	Ave		0.6473				9.3		15.0			
Tert-butyl ethyl ether	0.5822 0.6284	0.5727	0.6227	0.7065	0.6607	Ave		0.6289				7.9		15.0			
Ethyl acetate	0.1229 0.1014	0.1043	0.0986	0.1166	0.1067	Ave		0.1084				8.7		15.0			
Propionitrile	0.0090 0.0121	0.0100	0.0116	0.0125	0.0124	Ave		0.0113				12.8		15.0			
Methacrylonitrile	0.0771 0.0782	0.0721	0.0781	0.0892	0.0828	Ave		0.0796				7.3		15.0			
Tert-amyl methyl ether	0.3682 0.4264	0.3562	0.3924	0.4546	0.4460	Ave		0.4073				10.1		15.0			
n-Butanol	0.1145 0.3976	0.2631	0.1674	0.3347	0.3401	Lin	-18.32	0.4007							0.9950		0.9900
Methyl methacrylate	0.0137 0.0219	0.0140	0.0181	0.0221	0.0224	Lin2	-0.019	0.0216							0.9900		0.9900
2-Nitropropane	0.0120 0.0110	0.0110	0.0074	0.0087	0.0099	Lin1	-0.002	0.0104							0.9900		0.9900
cis-1,4-Dichloro-2-butene	0.1033 0.1428	0.1115	0.1244	0.1534	0.1481	Lin2	-0.096	0.1453							0.9940		0.9900
1,2,3-Trimethylbenzene	3.5500 3.4562	3.4389	3.2027	3.8096	4.0033	Ave		3.5768				8.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 341836

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/13/2016 12:16 Calibration End Date: 09/13/2016 13:53 Calibration ID: 26995

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.2698 0.2402	0.2393	0.2451	0.2685	0.2506	Ave		0.2523				5.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2693 0.2353	0.2559	0.2501	0.2733	0.2515	Ave		0.2559				5.4		15.0			
Toluene-d8 (Surr)	6.7229 5.7022	5.9723	5.7527	5.9680	5.8148	Ave		5.9888				6.3		15.0			
4-Bromofluorobenzene (Surr)	1.4598 1.1632	1.2556	1.1918	1.2398	1.2147	Ave		1.2542				8.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 341836

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/13/2016 12:16 Calibration End Date: 09/13/2016 13:53 Calibration ID: 26995

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-341836/21	P1846.D
Level 2	STD020 280-341836/22	P1847.D
Level 3	STD050 280-341836/23	P1848.D
Level 4	ICIS 280-341836/24	P1849.D
Level 5	STD30 280-341836/25	P1850.D
Level 6	STD60 280-341836/26	P1851.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Ethanol	TBAd 9	Ave	+++++ 279789	6745	20899	37863	132781	+++++ 2400	80.0	200	400	1200
Isopropyl alcohol	TBAd 9	Ave	6336 364379	13348	29983	62735	173539	10.0 600	20.0	50.0	100	300
Acetonitrile	FB	Lin1	15580 821055	19056	67257	119418	396383	10.0 600	20.0	50.0	100	300
Isopropyl ether	FB	Ave	17929 1218198	35090	89682	177456	602206	1.00 60.0	2.00	5.00	10.0	30.0
2-Chloro-1,3-butadiene	FB	Ave	63347 3974789	122253	257845	583818	2111570	1.00 60.0	2.00	5.00	10.0	30.0
Tert-butyl ethyl ether	FB	Ave	57129 3970896	113119	286812	582486	1930718	1.00 60.0	2.00	5.00	10.0	30.0
Ethyl acetate	FB	Ave	24125 1281982	41199	90798	192316	623364	2.00 120	4.00	10.0	20.0	60.0
Propionitrile	FB	Ave	8831 762414	19700	53661	102851	363439	10.0 600	20.0	50.0	100	300
Methacrylonitrile	FB	Ave	75688 4938969	142378	359884	735364	2418338	10.0 600	20.0	50.0	100	300
Tert-amyl methyl ether	FB	Ave	36127 2694599	70368	180738	374795	1303398	1.00 60.0	2.00	5.00	10.0	30.0
n-Butanol	TBAd 9	Lin	1453 317577	6480	10024	33273	119826	25.0 1500	50.0	125	250	750
Methyl methacrylate	FB	Lin2	2693 276940	5537	16709	36396	131007	2.00 120	4.00	10.0	20.0	60.0
2-Nitropropane	FB	Lin1	2354 138846	4360	6863	14343	58141	2.00 120	4.00	10.0	20.0	60.0
cis-1,4-Dichloro-2-butene	DCBd 4	Lin2	5477 502691	11744	31362	68747	237621	2.00 120	4.00	10.0	20.0	60.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	94120 6084696	181030	403815	853382	3211536	1.00 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	26471 1517508	47275	112914	221378	732429	1.00 60.0	2.00	5.00	10.0	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 341836

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/13/2016 12:16 Calibration End Date: 09/13/2016 13:53 Calibration ID: 26995

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane-d4 (Surr)	FB	Ave	26419 1487045	50544	115183	225353	734984	1.00 60.0	2.00	5.00	10.0	30.0
Toluene-d8 (Surr)	CBNZ d5	Ave	120079 6650345	216118	489610	909412	3186138	1.00 60.0	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	38704 2047777	66099	150275	277738	974455	1.00 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1846.D
 Lims ID: STD010
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 13-Sep-2016 12:16:30 ALS Bottle#: 20 Worklist Smp#: 21
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD010
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 14-Sep-2016 16:46:43 Calib Date: 13-Sep-2016 13:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: seifertj

Date: 14-Sep-2016 09:45:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.665	5.672	-0.007	94	126951	250.0	250.0	
* 1 Fluorobenzene	96	7.639	7.638	0.001	97	1226495	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.898	9.905	-0.007	93	223265	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.729	11.728	0.001	97	331413	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.095	7.095	0.000	92	26471	1.00	1.07	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.388	7.388	0.000	97	26419	1.00	1.05	
\$ 7 Toluene-d8 (Surr)	98	8.826	8.826	0.000	96	120079	1.00	1.12	
\$ 8 4-Bromofluorobenzene (Surr	95	10.770	10.770	0.000	83	38704	1.00	1.16	
28 Ethylene oxide	43	4.588	4.585	0.003	100	87200	100.0	120.0	
33 Ethanol	45		4.990				ND	ND	
38 Propene oxide	58	5.230	5.228	0.002	96	221110	100.0	93.3	
42 Isopropyl alcohol	45	5.412	5.409	0.003	88	6336	10.0	9.59	
46 Acetonitrile	41	5.651	5.651	0.000	84	15580	10.0	11.4	
56 Isopropyl ether	87	6.252	6.259	-0.007	96	17929	1.00	0.9377	
58 2-Chloro-1,3-butadiene	53	6.380	6.380	0.000	95	63347	1.00	1.00	
59 Tert-butyl ethyl ether	59	6.538	6.538	0.000	96	57129	1.00	0.9258	
60 Ethyl acetate	43	6.688	6.688	0.000	95	24125	2.00	2.27	
65 Propionitrile	54	6.788	6.781	0.007	95	8831	10.0	7.99	
66 Methacrylonitrile	41	6.902	6.895	0.007	97	75688	10.0	9.69	
75 Tert-amyl methyl ether	73	7.439	7.438	0.001	88	36127	1.00	0.9040	
78 n-Butanol	56	7.703	7.682	0.021	23	1453	25.0	52.8	
81 Methyl methacrylate	100	8.068	8.060	0.008	91	2693	2.00	2.15	
88 2-Nitropropane	41	8.440	8.439	0.001	86	2354	2.00	2.55	
99 Tetrahydrothiophene	60		9.512				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.649	10.649	0.000	86	5477	2.00	2.08	
125 1,2,3-Trimethylbenzene	105	11.750	11.750	0.000	99	94120	1.00	0.99	
16 1,3,5-Trichlorobenzene	180	13.080	13.080	0.000	94	35985	1.00	0.99	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 0.50	Units: uL
MV-ARCH SS A_00073	Amount Added: 0.08	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1846.D

Injection Date: 13-Sep-2016 12:16:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD010

Worklist Smp#: 21

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

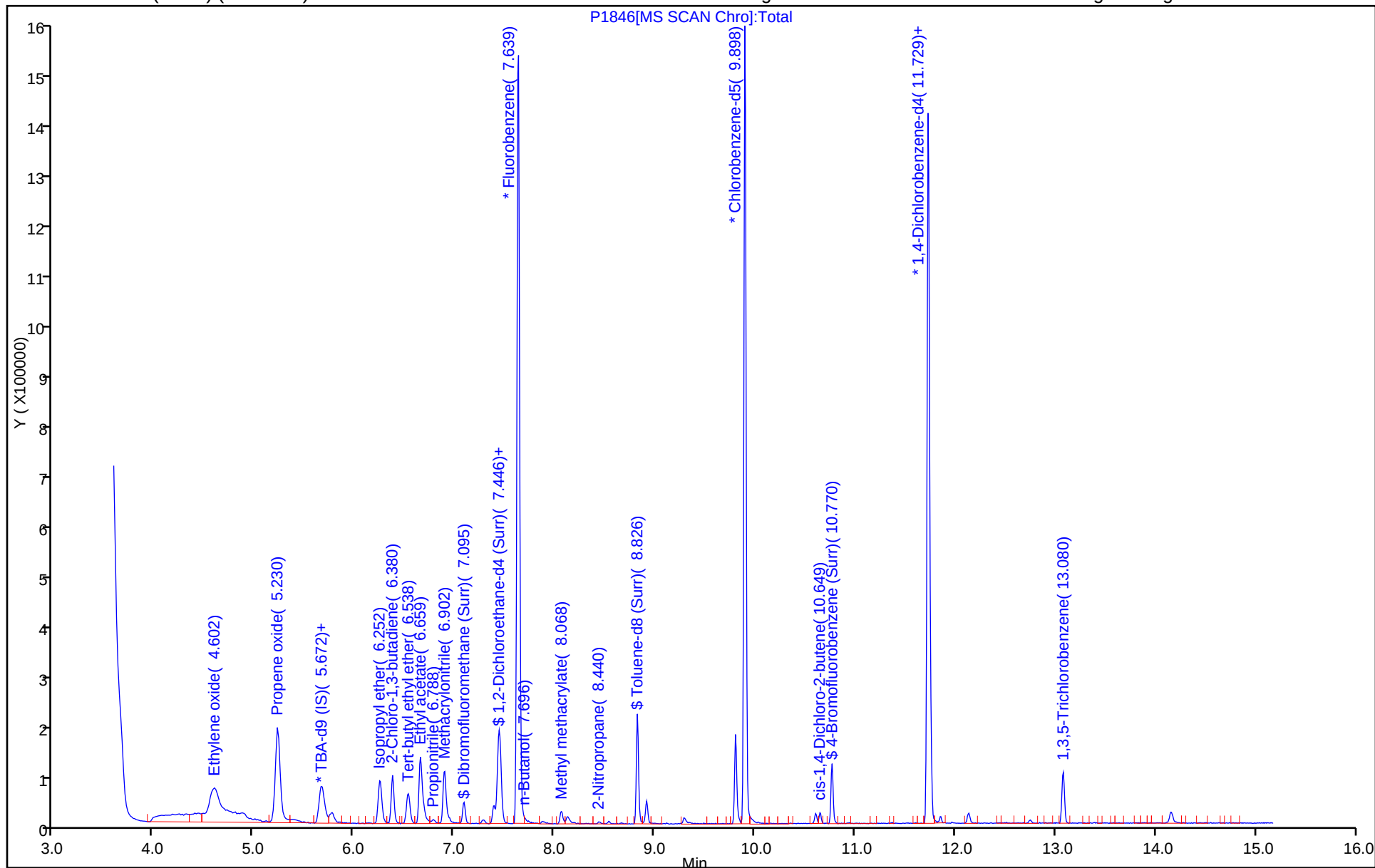
ALS Bottle#: 20

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1847.D
 Lims ID: STD020
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 13-Sep-2016 12:35:30 ALS Bottle#: 21 Worklist Smp#: 22
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD020
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 14-Sep-2016 16:46:46 Calib Date: 13-Sep-2016 13:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: seifertj

Date: 14-Sep-2016 09:46:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.672	5.672	0.000	93	123165	250.0	250.0	
* 1 Fluorobenzene	96	7.638	7.638	0.000	97	1234569	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.904	9.905	-0.001	92	226167	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.728	11.728	0.000	97	329016	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.094	7.095	-0.001	92	47275	2.00	1.90	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.388	7.388	0.000	99	50544	2.00	2.00	
\$ 7 Toluene-d8 (Surr)	98	8.825	8.826	-0.001	96	216118	2.00	1.99	
\$ 8 4-Bromofluorobenzene (Surr	95	10.770	10.770	0.000	83	66099	2.00	2.00	
28 Ethylene oxide	43	4.600	4.585	0.015	100	137957	200.0	188.6	
33 Ethanol	45	4.991	4.990	0.001	88	6745	80.0	63.3	
38 Propene oxide	58	5.228	5.228	0.000	96	436962	200.0	183.1	
42 Isopropyl alcohol	45	5.410	5.409	0.001	88	13348	20.0	20.8	
46 Acetonitrile	41	5.657	5.651	0.006	30	19056	20.0	13.9	
56 Isopropyl ether	87	6.251	6.259	-0.008	95	35090	2.00	1.82	
58 2-Chloro-1,3-butadiene	53	6.379	6.380	-0.001	95	122253	2.00	1.91	
59 Tert-butyl ethyl ether	59	6.537	6.538	-0.001	97	113119	2.00	1.82	
60 Ethyl acetate	43	6.687	6.688	-0.001	97	41199	4.00	3.85	
65 Propionitrile	54	6.780	6.781	-0.001	95	19700	20.0	17.7	
66 Methacrylonitrile	41	6.894	6.895	-0.001	98	142378	20.0	18.1	
75 Tert-amyl methyl ether	73	7.438	7.438	0.000	91	70368	2.00	1.75	
78 n-Butanol	56	7.681	7.682	-0.001	23	6480	50.0	78.5	Ma
81 Methyl methacrylate	100	8.067	8.060	0.007	92	5537	4.00	3.47	
88 2-Nitropropane	41	8.439	8.439	0.000	89	4360	4.00	4.48	
99 Tetrahydrothiophene	60		9.512				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.648	10.649	-0.001	88	11744	4.00	3.73	
125 1,2,3-Trimethylbenzene	105	11.749	11.750	-0.001	98	181030	2.00	1.92	
16 1,3,5-Trichlorobenzene	180	13.079	13.080	-0.001	95	71917	2.00	2.00	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MV-Supp A_00021	Amount Added: 1.00	Units: uL
MV-ARCH SS A_00073	Amount Added: 0.16	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1847.D

Injection Date: 13-Sep-2016 12:35:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD020

Worklist Smp#: 22

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

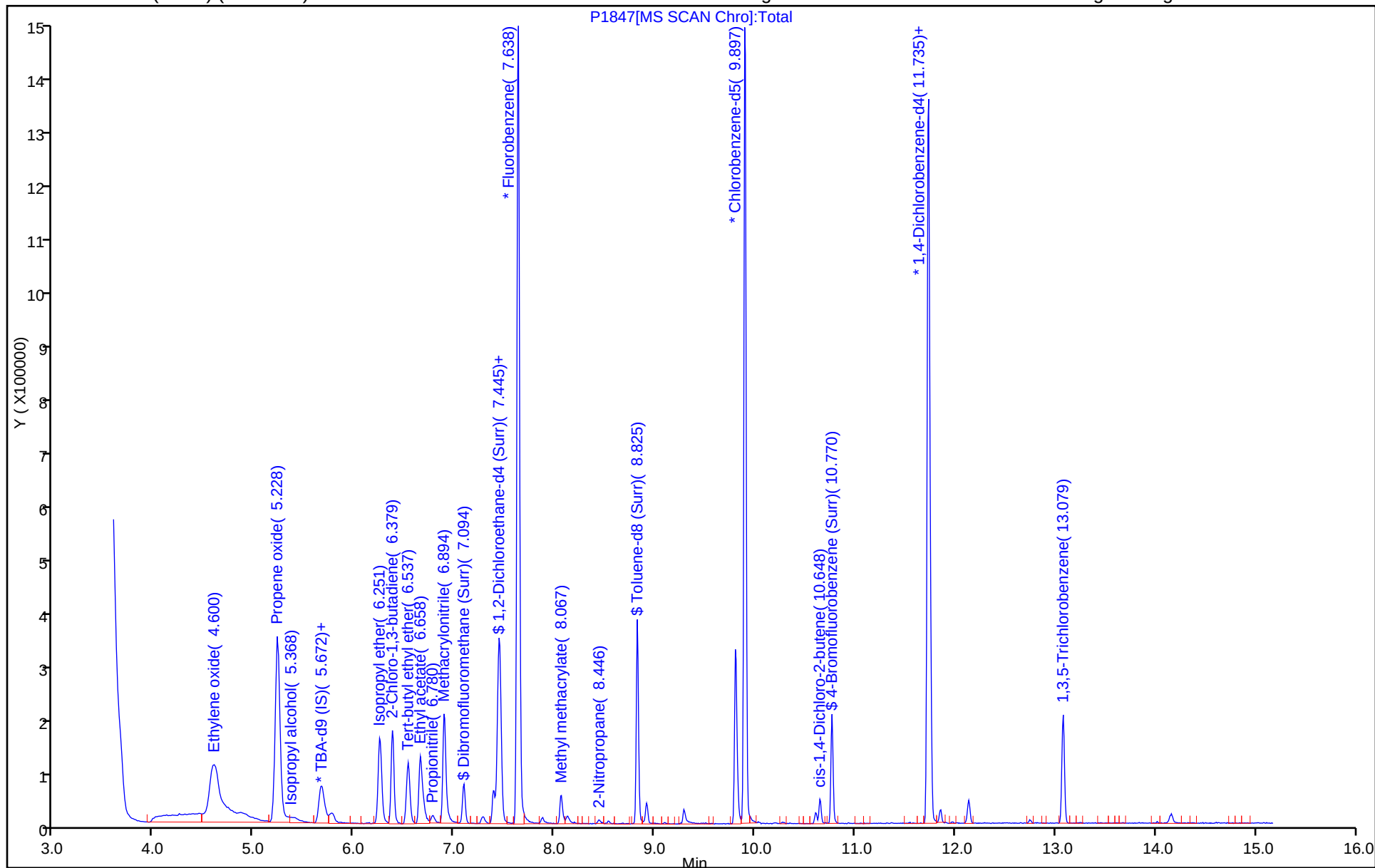
ALS Bottle#: 21

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1847.D

Injection Date: 13-Sep-2016 12:35:30

Instrument ID: VMS_P

Lims ID: STD020

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#:

21

Worklist Smp#: 22

Purge Vol: 20.000 mL

Dil. Factor:

1.0000

Method: AQ_VMSP_8260

Limit Group:

MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Detector

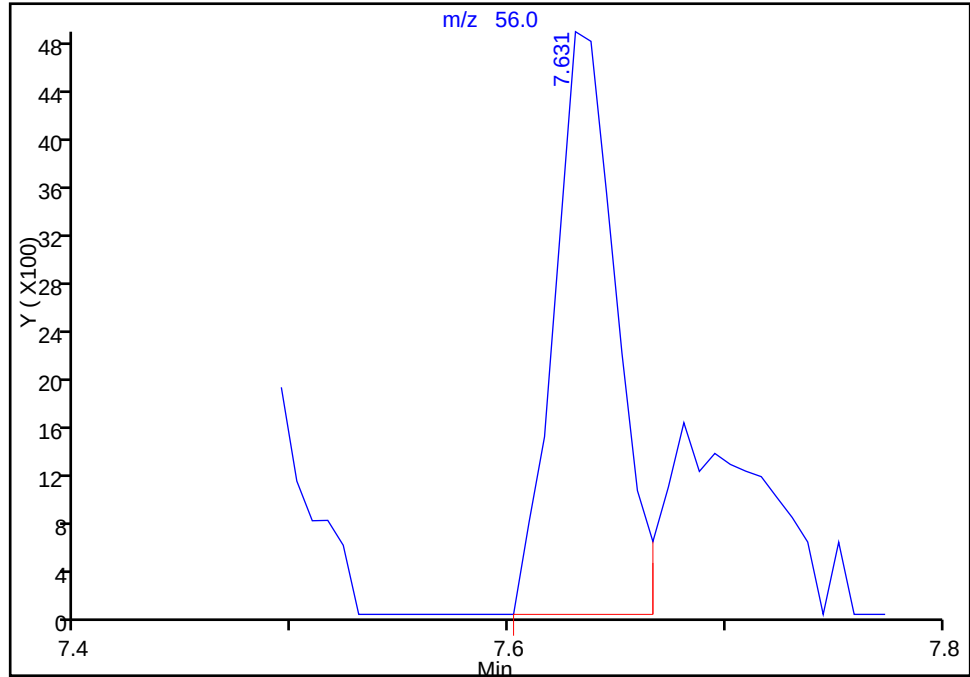
MS SCAN

78 n-Butanol, CAS: 71-36-3

Signal: 1

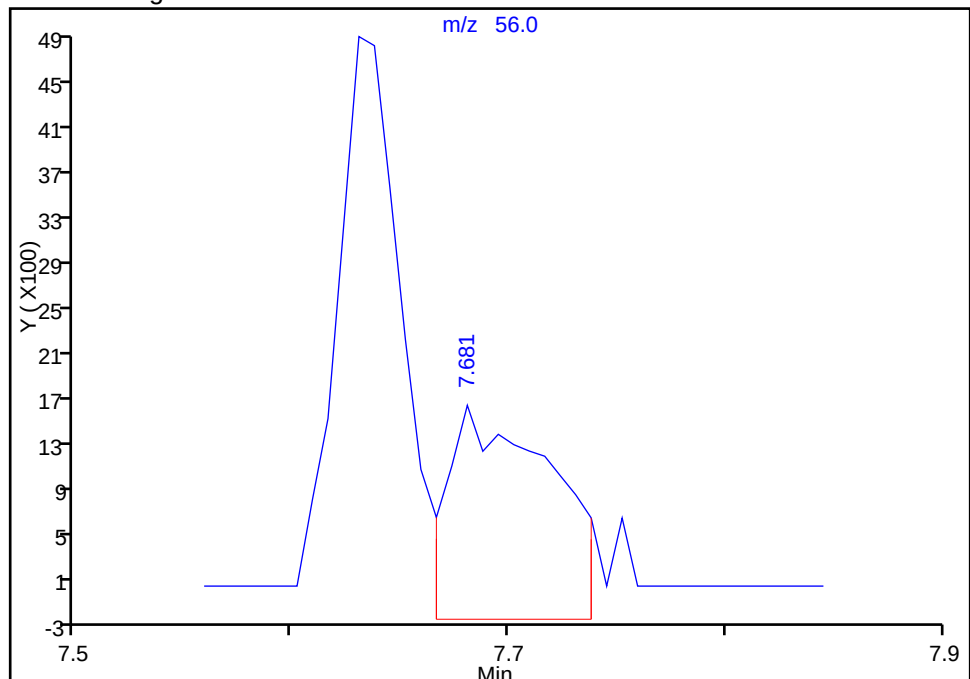
RT: 7.63
Area: 9670
Amount: 90.613791
Amount Units: ug/l

Processing Integration Results



RT: 7.68
Area: 6480
Amount: 78.532268
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 14-Sep-2016 09:47:20

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1847.D

Injection Date: 13-Sep-2016 12:35:30

Instrument ID: VMS_P

Lims ID: STD020

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#: 21

Worklist Smp#: 22

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

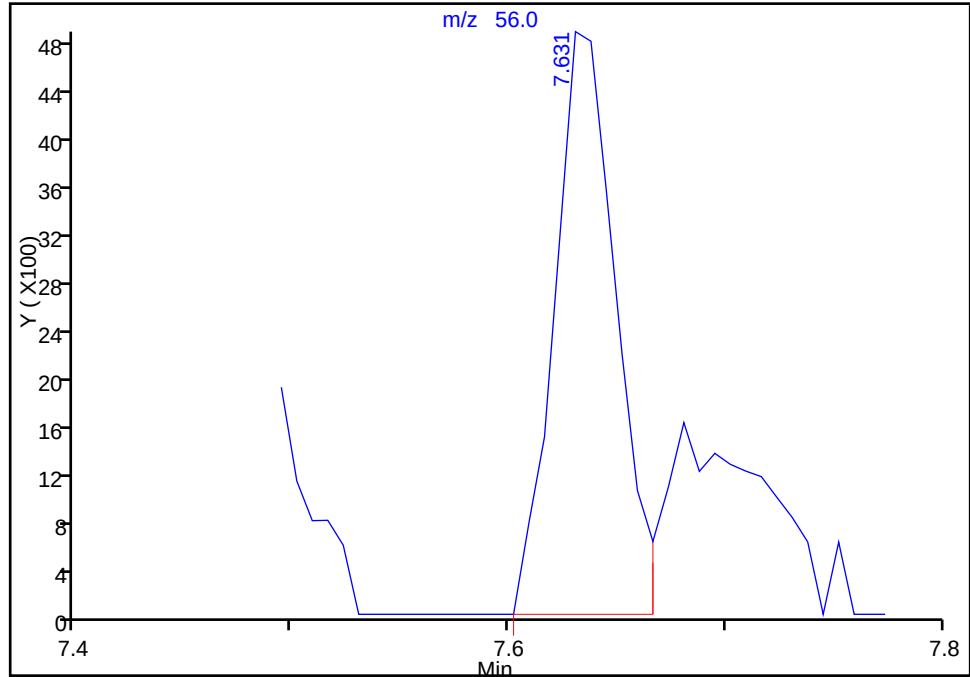
Detector: MS SCAN

78 n-Butanol, CAS: 71-36-3

Signal: 1

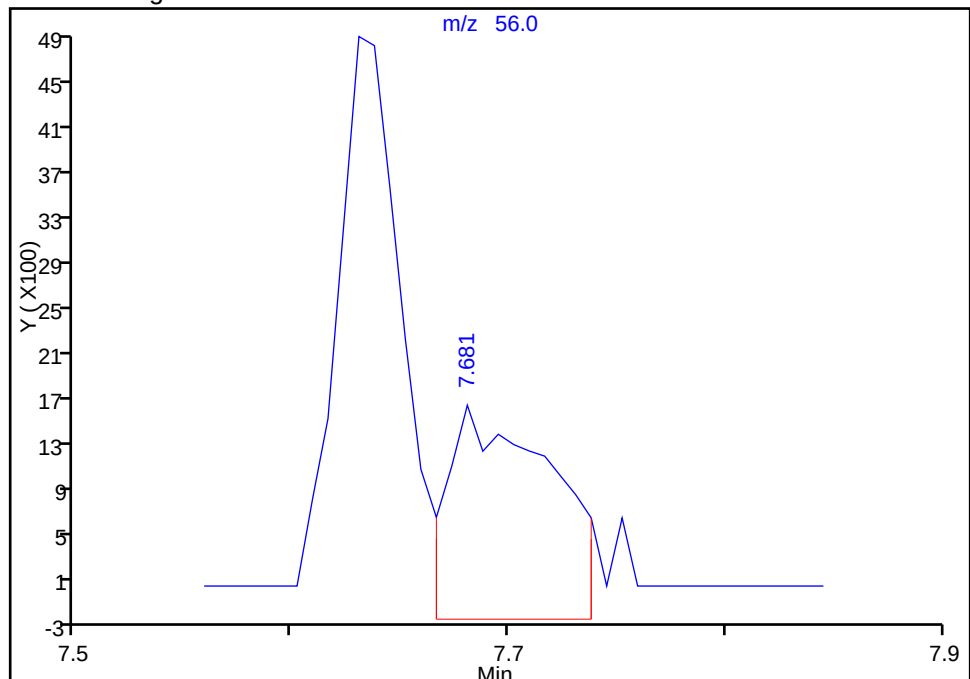
RT: 7.63
Area: 9670
Amount: 90.613791
Amount Units: ug/l

Processing Integration Results



RT: 7.68
Area: 6480
Amount: 78.532268
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 14-Sep-2016 09:47:20

Audit Action: Manually Integrated

Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1848.D
 Lims ID: STD050
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 13-Sep-2016 12:55:30 ALS Bottle#: 22 Worklist Smp#: 23
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD050
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 14-Sep-2016 16:46:49 Calib Date: 13-Sep-2016 13:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: seifertj

Date: 14-Sep-2016 09:47:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.664	5.672	-0.008	93	119741	250.0	250.0	
* 1 Fluorobenzene	96	7.630	7.638	-0.008	97	1151527	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.897	9.905	-0.008	93	212773	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.735	11.728	0.007	97	315215	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.087	7.095	-0.008	92	112914	5.00	4.86	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.387	7.388	-0.001	99	115183	5.00	4.89	
\$ 7 Toluene-d8 (Surr)	98	8.824	8.826	-0.002	96	489610	5.00	4.80	
\$ 8 4-Bromofluorobenzene (Surr	95	10.769	10.770	-0.001	83	150275	5.00	4.75	
28 Ethylene oxide	43	4.585	4.585	0.000	99	357846	500.0	524.5	
33 Ethanol	45	4.990	4.990	0.000	93	20899	200.0	201.7	
38 Propene oxide	58	5.228	5.228	0.000	96	1160453	500.0	521.3	
42 Isopropyl alcohol	45	5.409	5.409	0.000	92	29983	50.0	48.1	
46 Acetonitrile	41	5.650	5.651	-0.001	55	67257	50.0	54.4	
56 Isopropyl ether	87	6.250	6.259	-0.009	95	89682	5.00	5.00	
58 2-Chloro-1,3-butadiene	53	6.379	6.380	-0.001	95	257845	5.00	4.32	
59 Tert-butyl ethyl ether	59	6.529	6.538	-0.009	98	286812	5.00	4.95	
60 Ethyl acetate	43	6.687	6.688	-0.001	99	90798	10.0	9.09	
65 Propionitrile	54	6.780	6.781	-0.001	98	53661	50.0	51.7	
66 Methacrylonitrile	41	6.894	6.895	-0.001	97	359884	50.0	49.1	
75 Tert-amyl methyl ether	73	7.437	7.438	-0.001	91	180738	5.00	4.82	
78 n-Butanol	56	7.680	7.682	-0.002	93	10024	125.0	97.9	
81 Methyl methacrylate	100	8.059	8.060	-0.001	91	16709	10.0	9.26	
88 2-Nitropropane	41	8.438	8.439	-0.001	91	6863	10.0	7.40	
99 Tetrahydrothiophene	60		9.512				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.648	10.649	-0.001	91	31362	10.0	9.22	
125 1,2,3-Trimethylbenzene	105	11.749	11.750	-0.001	99	403815	5.00	4.48	
16 1,3,5-Trichlorobenzene	180	13.079	13.080	-0.001	95	149920	5.00	4.36	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 2.50	Units: uL
MV-ARCH SS A_00073	Amount Added: 0.40	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1848.D

Injection Date: 13-Sep-2016 12:55:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD050

Worklist Smp#: 23

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

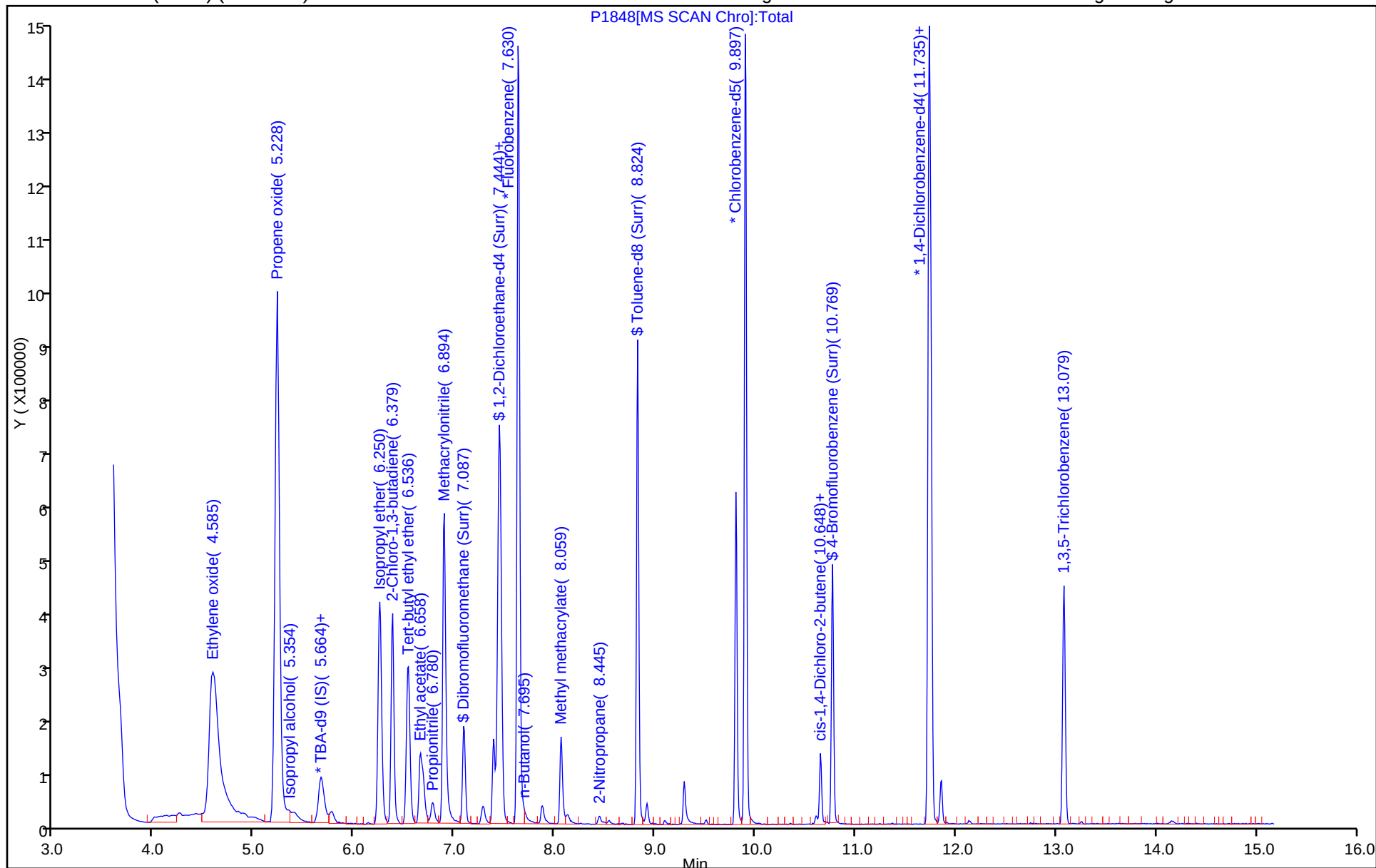
ALS Bottle#: 22

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1849.D
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 5
 Inject. Date: 13-Sep-2016 13:14:30 ALS Bottle#: 23 Worklist Smp#: 24
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICIS
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 14-Sep-2016 16:46:51 Calib Date: 13-Sep-2016 13:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: seifertj

Date: 14-Sep-2016 09:48:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.672	5.672	0.000	94	99422	250.0	250.0	
* 1 Fluorobenzene	96	7.638	7.638	0.000	97	1030520	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.904	9.904	0.000	92	190476	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.735	11.735	0.000	97	280012	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.094	7.094	0.000	92	221378	10.0	10.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.388	7.388	0.000	99	225353	10.0	10.7	
\$ 7 Toluene-d8 (Surr)	98	8.825	8.825	0.000	96	909412	10.0	9.97	
\$ 8 4-Bromofluorobenzene (Surr	95	10.770	10.770	0.000	83	277738	10.0	9.89	
28 Ethylene oxide	43	4.600	4.600	0.000	100	614675	1000.0	1006.6	
33 Ethanol	45	4.991	4.991	0.000	98	37863	400.0	440.1	
38 Propene oxide	58	5.229	5.229	0.000	96	2331488	1000.0	1170.3	
42 Isopropyl alcohol	45	5.410	5.410	0.000	94	62735	100.0	121.3	
46 Acetonitrile	41	5.650	5.650	0.000	98	119418	100.0	108.4	
56 Isopropyl ether	87	6.258	6.258	0.000	95	177456	10.0	11.0	
58 2-Chloro-1,3-butadiene	53	6.379	6.379	0.000	95	583818	10.0	10.9	
59 Tert-butyl ethyl ether	59	6.537	6.537	0.000	98	582486	10.0	11.2	
60 Ethyl acetate	43	6.687	6.687	0.000	99	192316	20.0	21.5	
65 Propionitrile	54	6.780	6.780	0.000	98	102851	100.0	110.7	
66 Methacrylonitrile	41	6.894	6.894	0.000	97	735364	100.0	112.1	
75 Tert-amyl methyl ether	73	7.445	7.445	0.000	92	374795	10.0	11.2	
78 n-Butanol	56	7.681	7.681	0.000	97	33273	250.0	254.5	
81 Methyl methacrylate	100	8.060	8.060	0.000	91	36396	20.0	21.3	
88 2-Nitropropane	41	8.439	8.439	0.000	91	14343	20.0	17.0	
99 Tetrahydrothiophene	60		9.512				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.648	10.648	0.000	95	68747	20.0	21.8	
125 1,2,3-Trimethylbenzene	105	11.749	11.749	0.000	99	853382	10.0	10.7	
16 1,3,5-Trichlorobenzene	180	13.079	13.079	0.000	95	321825	10.0	10.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00073	Amount Added: 0.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1849.D

Injection Date: 13-Sep-2016 13:14:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: ICIS

Worklist Smp#: 24

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

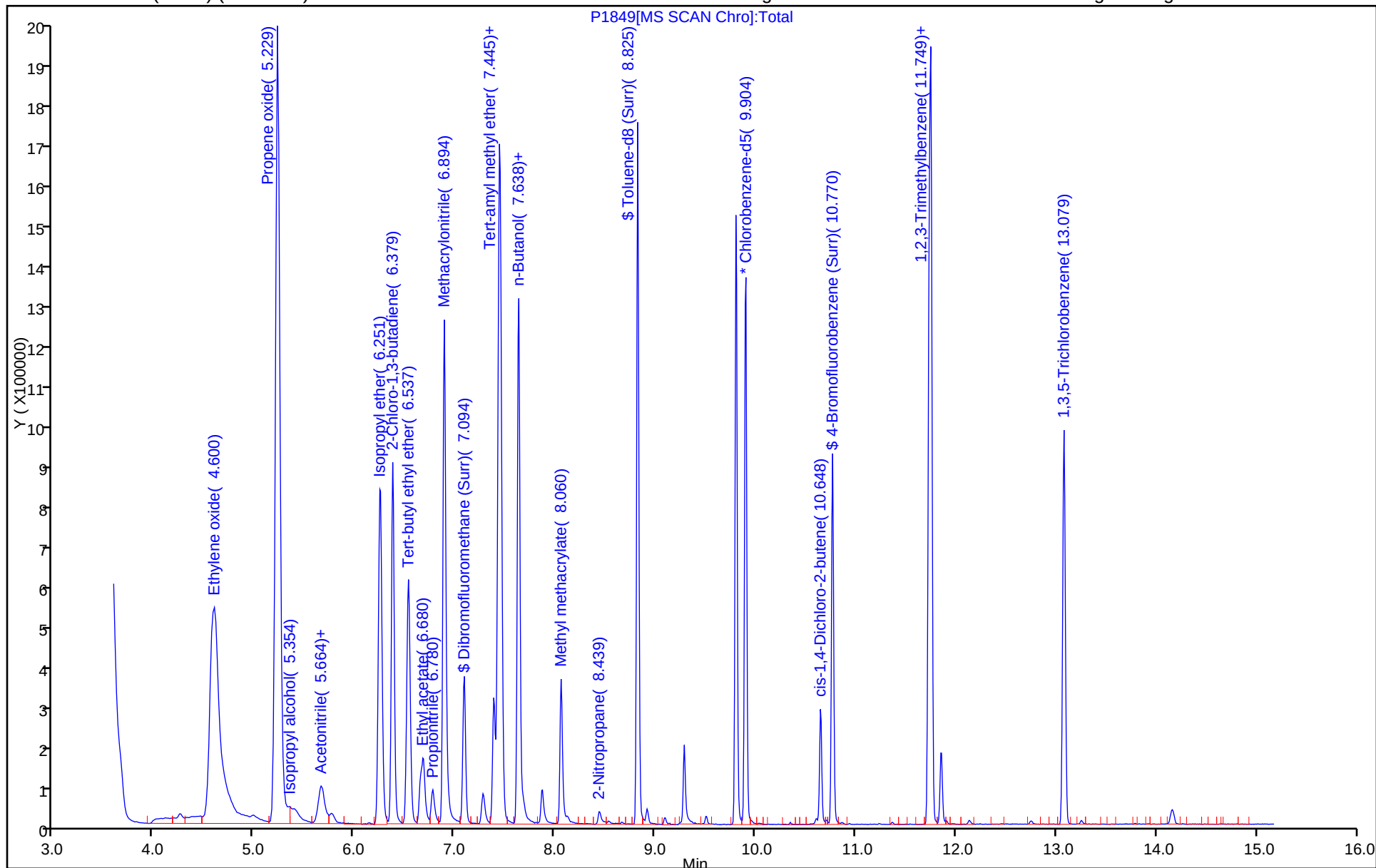
ALS Bottle#: 23

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1850.D
 Lims ID: STD30
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 13-Sep-2016 13:34:30 ALS Bottle#: 24 Worklist Smp#: 25
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD30
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 14-Sep-2016 16:46:53 Calib Date: 13-Sep-2016 13:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: seifertj

Date: 14-Sep-2016 09:48:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.665	5.672	-0.007	93	117450	250.0	250.0	
* 1 Fluorobenzene	96	7.639	7.638	0.001	97	1217675	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.898	9.904	-0.006	93	228305	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.736	11.735	0.001	97	334261	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.095	7.094	0.001	92	732429	30.0	29.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.389	7.388	0.001	99	734984	30.0	29.5	
\$ 7 Toluene-d8 (Surr)	98	8.826	8.825	0.001	96	3186138	30.0	29.1	
\$ 8 4-Bromofluorobenzene (Surr	95	10.771	10.770	0.001	85	974455	30.0	29.1	
28 Ethylene oxide	43	4.588	4.600	-0.012	100	1735209	3000.0	2404.9	
33 Ethanol	45	4.993	4.991	0.002	99	132781	1200.0	1306.3	
38 Propene oxide	58	5.230	5.229	0.001	96	7280909	3000.0	3092.9	
42 Isopropyl alcohol	45	5.412	5.410	0.002	96	173539	300.0	284.0	
46 Acetonitrile	41	5.651	5.650	0.001	99	396383	300.0	305.7	
56 Isopropyl ether	87	6.252	6.258	-0.006	95	602206	30.0	31.7	
58 2-Chloro-1,3-butadiene	53	6.380	6.379	0.001	95	2111570	30.0	33.5	
59 Tert-butyl ethyl ether	59	6.538	6.537	0.001	98	1930718	30.0	31.5	
60 Ethyl acetate	43	6.688	6.687	0.001	99	623364	60.0	59.0	
65 Propionitrile	54	6.774	6.780	-0.006	99	363439	300.0	331.1	
66 Methacrylonitrile	41	6.895	6.894	0.001	97	2418338	300.0	312.0	
75 Tert-amyl methyl ether	73	7.439	7.445	-0.006	91	1303398	30.0	32.8	
78 n-Butanol	56	7.675	7.681	-0.006	97	119826	750.0	682.2	
81 Methyl methacrylate	100	8.061	8.060	0.001	92	131007	60.0	63.0	
88 2-Nitropropane	41	8.440	8.439	0.001	96	58141	60.0	57.6	
99 Tetrahydrothiophene	60		9.512				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.649	10.648	0.001	96	237621	60.0	61.8	
125 1,2,3-Trimethylbenzene	105	11.750	11.749	0.001	99	3211536	30.0	33.6	
16 1,3,5-Trichlorobenzene	180	13.080	13.079	0.001	95	1223680	30.0	33.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 15.00	Units: uL
MV-ARCH SS A_00073	Amount Added: 2.40	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1850.D

Injection Date: 13-Sep-2016 13:34:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD30

Worklist Smp#: 25

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

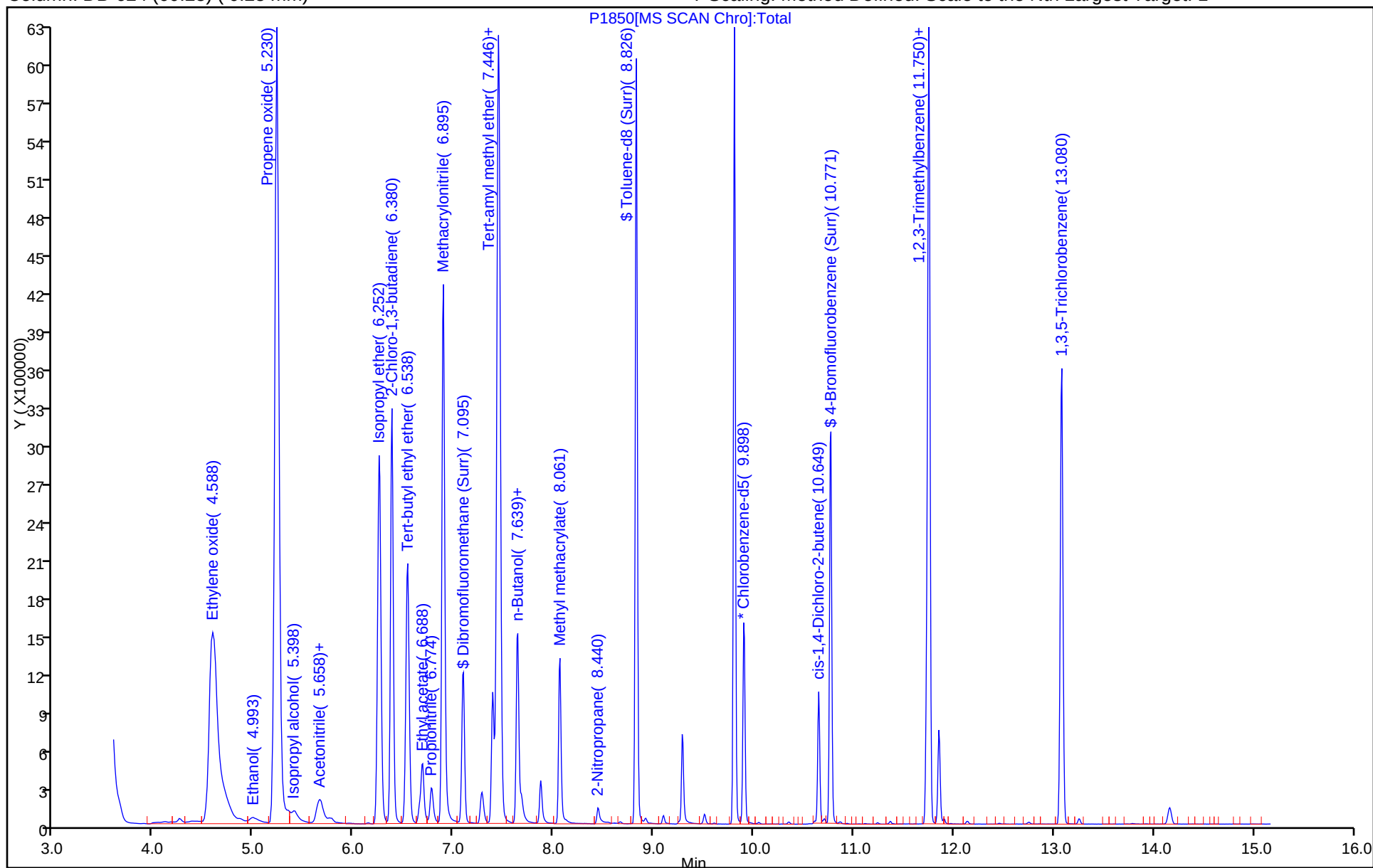
ALS Bottle#: 24

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Lims ID: STD60
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 13-Sep-2016 13:53:30 ALS Bottle#: 25 Worklist Smp#: 26
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD60
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 14-Sep-2016 16:46:57 Calib Date: 13-Sep-2016 13:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: seifertj

Date: 14-Sep-2016 09:49:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.672	5.672	0.000	95	133123	250.0	250.0	
* 1 Fluorobenzene	96	7.638	7.638	0.000	97	1316394	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.905	9.904	0.001	92	242975	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.735	11.735	0.000	97	366771	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.095	7.094	0.001	92	1517508	60.0	57.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.388	7.388	0.000	99	1487045	60.0	55.2	
\$ 7 Toluene-d8 (Surr)	98	8.825	8.825	0.000	96	6650345	60.0	57.1	
\$ 8 4-Bromofluorobenzene (Surr	95	10.770	10.770	0.000	84	2047777	60.0	55.6	
28 Ethylene oxide	43	4.598	4.600	-0.002	100	3074460	6000.0	3941.6	
33 Ethanol	45	5.003	4.991	0.012	100	279789	2400.0	2428.6	
38 Propene oxide	58	5.227	5.229	-0.002	96	13870225	6000.0	5450.1	
42 Isopropyl alcohol	45	5.408	5.410	-0.002	98	364379	600.0	526.1	
46 Acetonitrile	41	5.650	5.650	0.000	99	821055	600.0	586.2	
56 Isopropyl ether	87	6.258	6.258	0.000	95	1218198	60.0	59.4	
58 2-Chloro-1,3-butadiene	53	6.380	6.379	0.001	95	3974789	60.0	58.3	
59 Tert-butyl ethyl ether	59	6.537	6.537	0.000	98	3970896	60.0	60.0	
60 Ethyl acetate	43	6.687	6.687	0.000	99	1281982	120.0	112.3	
65 Propionitrile	54	6.780	6.780	0.000	99	762414	600.0	642.6	
66 Methacrylonitrile	41	6.895	6.894	0.001	97	4938969	600.0	589.3	
75 Tert-amyl methyl ether	73	7.438	7.445	-0.007	94	2694599	60.0	62.8	
78 n-Butanol	56	7.674	7.681	-0.007	97	317577	1500.0	1534.0	
81 Methyl methacrylate	100	8.060	8.060	0.000	92	276940	120.0	122.4	
88 2-Nitropropane	41	8.439	8.439	0.000	95	138846	120.0	127.0	
99 Tetrahydrothiophene	60		9.512				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.648	10.648	0.000	94	502691	120.0	118.5	
125 1,2,3-Trimethylbenzene	105	11.749	11.749	0.000	99	6084696	60.0	58.0	
16 1,3,5-Trichlorobenzene	180	13.079	13.079	0.000	95	2307436	60.0	57.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 30.00	Units: uL
MV-ARCH SS A_00073	Amount Added: 4.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D

Injection Date: 13-Sep-2016 13:53:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD60

Worklist Smp#: 26

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

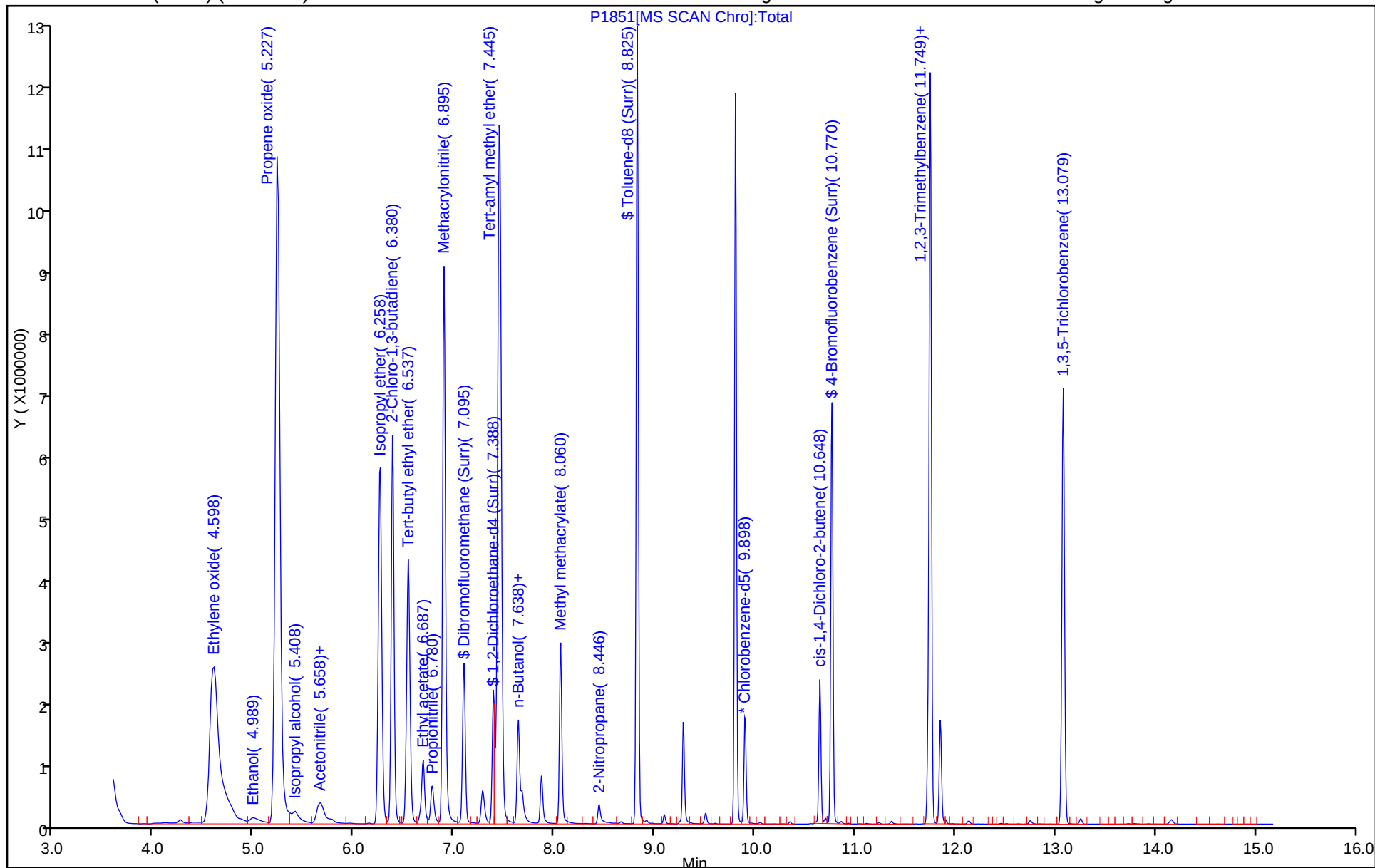
ALS Bottle#: 25

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD003 280-347337/10	P2900.D
Level 2	STD010 280-347337/11	P2901.D
Level 3	STD020 280-347337/12	P2902.D
Level 4	STD050 280-347337/13	P2903.D
Level 5	ICIS 280-347337/14	P2904.D
Level 6	STD30 280-347337/15	P2905.D
Level 7	STD60 280-347337/16	P2906.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.4412 0.5539	0.4339 0.4738	0.4091	0.5528	0.5011	Ave		0.4808				12.0		15.0			
Chloromethane	0.4792 0.3795	0.3820 0.3326	0.3519	0.3888	0.3435	Ave		0.3796			0.1000	12.9		15.0			
Vinyl chloride	0.3681 0.3733	0.3429 0.3300	0.3266	0.3778	0.3397	Ave		0.3512				6.1		30.0			
Bromomethane	0.2279 0.2247	0.2123 0.1969	0.2018	0.2232	0.2008	Ave		0.2125				6.1		15.0			
Chloroethane	0.2586 0.2123	0.2060 0.1913	0.2017	0.2101	0.1933	Ave		0.2105				10.8		15.0			
Dichlorofluoromethane	0.6681 0.6596	0.6166 0.5612	0.6178	0.6707	0.6061	Ave		0.6286				6.4		15.0			
Trichlorofluoromethane	0.5793 0.6729	0.6012 0.5882	0.5964	0.6728	0.6281	Ave		0.6198				6.3		15.0			
Ethyl ether	+++++ 0.1782	0.1419 0.1524	0.1502	0.1632	0.1621	Ave		0.1580				8.0		15.0			
Acrolein	0.0067 0.0100	0.0073 0.0095	0.0073	0.0081	0.0085	Ave		0.0082				14.9		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2861 0.3156	0.2939 0.2640	0.2745	0.2929	0.2850	Ave		0.2874				5.7		15.0			
Acetone	+++++ 0.0402	0.0445 0.0345	0.0423	0.0411	0.0338	Ave		0.0394				11.0		15.0			
1,1-Dichloroethene	0.3353 0.3897	0.3474 0.3354	0.3294	0.3618	0.3512	Ave		0.3500				5.9		30.0			
Iodomethane	0.5037 0.5219	0.4512 0.4653	0.4411	0.4782	0.4676	Ave		0.4756				6.0		15.0			
Methyl acetate	0.0881 0.0888	0.0748 0.0784	0.0792	0.0793	0.0800	Ave		0.0812				6.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337
SDG No.: _____
Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.5944 0.7404	0.5611 0.6543	0.5921	0.6476	0.6524	Ave		0.6346				9.3		15.0			
Carbon disulfide	1.1452 1.3907	1.0981 1.2025	1.0975	1.2569	1.2372	Ave		1.2040				8.6		15.0			
t-Butyl alcohol	1.2887 1.6986	1.1741 1.4915	1.4990	1.5321	1.3948	Ave		1.4398				11.9		15.0			
Methylene Chloride	1.2066 0.3164	0.5034 0.2766	0.3881	0.3360	0.3020	Lin1	0.2606	0.2826							0.9960		0.9900
Methyl tert-butyl ether	0.3922 0.4956	0.3696 0.4484	0.3939	0.4281	0.4363	Ave		0.4234				10.0		15.0			
Acrylonitrile	0.0248 0.0387	0.0280 0.0351	0.0308	0.0341	0.0344	Ave		0.0323				14.6		15.0			
trans-1,2-Dichloroethene	0.3273 0.3647	0.3371 0.3172	0.3169	0.3449	0.3327	Ave		0.3344				5.0		15.0			
Hexane	2.8449 3.0723	2.5410 2.6550	2.6703	2.9322	2.8826	Ave		2.7998				6.6		15.0			
Vinyl acetate	++++ 0.3231	0.2168 0.2952	0.2240	0.2512	0.2751	Lin2	-0.182	0.2923							0.9910		0.9900
1,1-Dichloroethane	0.6354 0.6946	0.6259 0.6107	0.6145	0.6608	0.6385	Ave		0.6401			0.1000	4.6		15.0			
2-Butanone (MEK)	++++ 0.0606	0.0361 0.0542	0.0419	0.0548	0.0534	Lin2	-0.090	0.0571							0.9960		0.9900
sec-Butyl Alcohol	++++ 1.2755	++++ 1.1891	0.8962	1.0097	1.0773	Ave		1.0896				13.6		15.0			
cis-1,2-Dichloroethene	0.3026 0.3485	0.2929 0.3039	0.3012	0.3250	0.3173	Ave		0.3131				6.1		15.0			
2,2-Dichloropropane	0.4426 0.5105	0.4032 0.4446	0.3930	0.4384	0.4337	Ave		0.4380				8.6		15.0			
Bromochloromethane	0.0979 0.1115	0.0902 0.0971	0.0947	0.1051	0.1018	Ave		0.0998				7.0		15.0			
Chloroform	0.5551 0.6297	0.5362 0.5449	0.5477	0.5892	0.5747	Ave		0.5682				5.8		30.0			
Tetrahydrofuran	++++ 0.0341	0.0226 0.0319	0.0249	0.0282	0.0300	Lin2	-0.021	0.0318							0.9960		0.9900
Isobutyl alcohol	++++ 0.5965	++++ 0.5007	0.4588	0.4832	0.4824	Ave		0.5043				10.6		15.0			
1,1,1-Trichloroethane	0.4402 0.5946	0.4498 0.5202	0.4504	0.5082	0.5082	Ave		0.4959				11.0		15.0			
Cyclohexane	0.6011 0.7855	0.6305 0.6685	0.6239	0.7181	0.7040	Ave		0.6760				9.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337
SDG No.: _____
Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.4733 0.5673	0.4895 0.4816	0.4862	0.5332	0.5212	Ave		0.5075				6.8		15.0			
Carbon tetrachloride	0.4253 0.5694	0.4155 0.4942	0.4282	0.4828	0.4847	Ave		0.4714				11.5		15.0			
1,2-Dichloroethane	0.3327 0.3743	0.2939 0.3239	0.3255	0.3384	0.3342	Ave		0.3318				7.2		15.0			
Benzene	1.2237 1.3696	1.2244 1.1570	1.2218	1.3208	1.2687	Ave		1.2551				5.7		15.0			
Trichloroethene	0.3483 0.3843	0.3265 0.3342	0.3370	0.3500	0.3447	Ave		0.3464				5.4		15.0			
Methylcyclohexane	0.5372 0.6631	0.5617 0.5515	0.5532	0.6040	0.5948	Ave		0.5808				7.5		15.0			
1,2-Dichloropropane	0.3031 0.3068	0.2635 0.2653	0.2702	0.2894	0.2824	Ave		0.2829				6.2		30.0			
1,4-Dioxane	++++ 0.0010	++++ 0.0009	0.0006	0.0008	0.0009	Lin2	-0.014	0.0010							0.9940		0.9900
Dibromomethane	0.0938 0.1183	0.0989 0.1047	0.0947	0.1077	0.1061	Ave		0.1034				8.3		15.0			
Bromodichloromethane	0.2747 0.3858	0.2758 0.3442	0.2837	0.3320	0.3361	Ave		0.3189				13.2		15.0			
2-Chloroethyl vinyl ether	++++ 0.0496	++++ 0.0527	0.0227	0.0263	0.0349	Lin1	-0.090	0.0526							0.9920		0.9900
cis-1,3-Dichloropropene	1.0914 1.9255	1.1434 1.7790	1.2865	1.5482	1.6545	Lin1	-0.430	1.8084							0.9960		0.9900
4-Methyl-2-pentanone (MIBK)	++++ 0.1264	0.0807 0.1120	0.0891	0.1065	0.1085	Lin2	-0.157	0.1160							0.9950		0.9900
Toluene	1.2517 1.4503	1.2147 1.1934	1.2632	1.3850	1.3317	Ave		1.2986				7.2		30.0			
Ethyl methacrylate	++++ 0.8431	0.3903 0.7870	0.5087	0.6097	0.6809	Lin2	-0.413	0.7639							0.9900		0.9900
trans-1,3-Dichloropropene	++++ 0.3073	0.1713 0.2756	0.1795	0.2356	0.2501	Lin1	-0.162	0.2864							0.9950		0.9900
1,1,2-Trichloroethane	0.1320 0.1554	0.1304 0.1347	0.1331	0.1421	0.1383	Ave		0.1380				6.3		15.0			
2-Hexanone	++++ 0.3998	0.2399 0.3606	0.2736	0.3317	0.3387	Lin2	-0.565	0.3676							0.9950		0.9900
1,3-Dichloropropane	1.2239 1.3773	1.1263 1.1943	1.1900	1.3126	1.2894	Ave		1.2448				6.9		15.0			
Tetrachloroethene	1.3059 1.3810	1.2757 1.1711	1.2788	1.3311	1.2997	Ave		1.2919				5.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337
SDG No.: _____
Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N
Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.4789 0.9114	0.5405 0.8474	0.6310	0.7148	0.7681	Lin1	-0.215	0.8577							0.9960		0.9900
1,2-Dibromoethane	0.4493 0.6856	0.5187 0.6212	0.5400	0.5947	0.6158	Ave		0.5750				13.6		15.0			
1-Chlorohexane	1.8417 2.5041	1.6849 2.1926	1.6980	2.0906	2.1752	Ave		2.0267				14.8		15.0			
Chlorobenzene	3.8983 3.9259	3.6224 3.3281	3.7082	3.7673	3.7002	Ave		3.7072			0.3000	5.4		15.0			
Ethylbenzene	2.2652 2.4724	2.2129 2.0773	2.2135	2.3651	2.3543	Ave		2.2801				5.7		30.0			
1,1,1,2-Tetrachloroethane	0.9023 1.2684	0.9221 1.1180	0.9904	1.0985	1.1310	Ave		1.0615				12.3		15.0			
m-Xylene & p-Xylene	2.5339 3.0549	2.5633 2.6255	2.6747	2.9121	2.8586	Ave		2.7462				7.2		15.0			
o-Xylene	2.3195 2.8176	2.2157 2.3589	2.4350	2.7641	2.6788	Ave		2.5128				9.5		15.0			
Styrene	++++ 4.0513	2.7757 3.4786	2.9934	3.6199	3.7095	Ave		3.4381				13.8		15.0			
Bromoform	++++ 0.3718	0.1982 0.3557	0.2166	0.2735	0.2989	Lin1	-0.242	0.3605			0.1000				0.9970		0.9900
Isopropylbenzene	4.6230 5.3697	4.3296 4.3838	4.4595	4.9763	4.9311	Ave		4.7247				8.1		15.0			
Cyclohexanone	++++ 0.0187	0.0107 0.0168	0.0122	0.0138	0.0153	Lin2	-0.274	0.0167							0.9900		0.9900
1,1,2,2-Tetrachloroethane	0.3980 0.5080	0.4030 0.4533	0.4169	0.4509	0.4449	Ave		0.4393			0.3000	8.6		15.0			
trans-1,4-Dichloro-2-butene	++++ 0.1575	0.0867 0.1493	0.0911	0.1167	0.1230	Lin1	-0.100	0.1515							0.9960		0.9900
1,2,3-Trichloropropane	0.1118 0.1438	0.1126 0.1277	0.1225	0.1276	0.1301	Ave		0.1252				8.8		15.0			
N-Propylbenzene	1.1278 1.4763	1.1854 1.2374	1.2742	1.4197	1.3745	Ave		1.2993				9.9		15.0			
Bromobenzene	0.8280 0.9381	0.7873 0.8073	0.8477	0.9111	0.8824	Ave		0.8574				6.5		15.0			
1,3,5-Trimethylbenzene	3.1725 4.4691	3.4590 3.7011	3.7615	4.1549	4.0918	Ave		3.8300				11.5		15.0			
2-Chlorotoluene	0.9808 1.1391	1.0303 0.9793	1.0453	1.1115	1.0549	Ave		1.0488				5.8		15.0			
4-Chlorotoluene	0.9836 1.1869	0.9696 1.0346	0.9749	1.1175	1.0756	Ave		1.0490				7.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337
SDG No.: _____
Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butylbenzene	3.1599 4.5243	3.3765 3.7895	3.6797	4.1278	4.1053	Ave		3.8233				12.3		15.0			
1,2,4-Trimethylbenzene	3.2255 4.5333	3.6532 3.7884	3.8347	4.2695	4.1634	Ave		3.9240				11.1		15.0			
sec-Butylbenzene	0.9137 1.2363	0.9960 1.0546	1.0489	1.1331	1.1218	Ave		1.0721				9.7		15.0			
4-Isopropyltoluene	3.5351 5.1316	4.0507 4.2321	4.2958	4.7791	4.6879	Ave		4.3875				12.0		15.0			
1,3-Dichlorobenzene	1.8003 2.1467	1.8391 1.8648	1.8888	1.9951	1.9540	Ave		1.9270				6.1		15.0			
1,4-Dichlorobenzene	2.0105 2.0916	1.8655 1.7936	1.8739	1.9786	1.8963	Ave		1.9300				5.3		15.0			
n-Butylbenzene	4.0719 5.5151	4.2461 4.4790	4.5499	5.0367	5.0130	Ave		4.7017				10.8		15.0			
1,2-Dichlorobenzene	1.4473 1.7685	1.5194 1.5417	1.4983	1.6188	1.5934	Ave		1.5696				6.7		15.0			
1,2-Dibromo-3-Chloropropane	++++ 0.0698	0.0334 0.0659	0.0443	0.0480	0.0530	Lin1	-0.047	0.0669							0.9950		0.9900
1,2,4-Trichlorobenzene	0.9501 1.2601	0.9127 1.1005	0.9303	1.0484	1.0644	Ave		1.0381				11.7		15.0			
Hexachlorobutadiene	0.7897 0.9912	0.8445 0.8481	0.7998	0.8608	0.8583	Ave		0.8561				7.7		15.0			
Naphthalene	++++ 1.6447	0.8825 1.4736	1.1578	1.1647	1.2818	Lin1	-0.832	1.5239							0.9940		0.9900
1,2,3-Trichlorobenzene	0.6375 0.9522	0.6848 0.8433	0.7423	0.7921	0.8124	Ave		0.7807				13.4		15.0			
Dibromofluoromethane (Surr)	++++ 0.2857	0.2940 0.2512	0.2678	0.2890	0.2600	Ave		0.2746				6.3		15.0			
1,2-Dichloroethane-d4 (Surr)	++++ 0.2940	0.3266 0.2557	0.2878	0.3119	0.2709	Ave		0.2911				8.9		15.0			
Toluene-d8 (Surr)	++++ 5.6039	5.7968 4.7481	5.3830	5.8777	5.3230	Ave		5.4554				7.5		15.0			
4-Bromofluorobenzene (Surr)	++++ 1.3170	1.3914 1.1622	1.2628	1.3469	1.1883	Ave		1.2781				7.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD003 280-347337/10	P2900.D
Level 2	STD010 280-347337/11	P2901.D
Level 3	STD020 280-347337/12	P2902.D
Level 4	STD050 280-347337/13	P2903.D
Level 5	ICIS 280-347337/14	P2904.D
Level 6	STD30 280-347337/15	P2905.D
Level 7	STD60 280-347337/16	P2906.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	16290 1952405	50709 4071153	96155	329877	622699	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	17692 1337703	44650 2858013	82710	231987	426874	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	13592 1315819	40075 2835725	76768	225450	422121	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	8414 792134	24814 1692011	47436	133185	249536	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	9549 748365	24071 1643552	47405	125345	240257	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	24667 2324875	72059 4822486	145217	400213	753168	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	21387 2371668	70262 5054545	140187	401447	780450	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	++++ 628239	16582 1309695	35317	97379	201445	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	2475 354161	8513 813964	17201	48078	105228	3.00 300	10.00 600	20.0	50.0	100.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	10565 1112346	34345 2268378	64530	174766	354187	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acetone	FB	Ave	++++ 567201	20826 1185840	39728	97993	167834	++++ 120	4.00 240	8.00	20.0	40.0
1,1-Dichloroethene	FB	Ave	12380 1373644	40598 2881934	77428	215904	436389	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Ave	18596 1839620	52735 3997922	103695	285329	581087	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Ave	16260 1565008	43687 3369678	93094	236699	496907	1.50 150	5.00 300	10.0	25.0	50.0
3-Chloro-1-propene	FB	Ave	21948 2609638	65581 5622408	139190	386433	810737	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm)) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	42282 4901916	128341 10332687	257992	750013	1537413	0.300 30.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd 9	Ave	2207 323930	6707 735100	17025	44643	91474	3.00 300	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Lin1	44551 1115186	58832 2376565	91235	200465	375274	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	14482 1746880	43193 3852600	92588	255438	542131	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Ave	9170 1363311	32733 3019007	72453	203186	427424	3.00 300	10.0 600	20.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	12085 1285510	39399 2725590	74499	205778	413411	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	21534 2288422	61063 4753923	127077	362052	732856	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Lin2	++++ 2277921	50672 5072575	105325	299771	683689	++++ 60.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	23459 2448312	73155 5248019	144454	394299	793419	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Lin2	++++ 854038	16894 1864391	39402	130835	265284	++++ 120	4.00 240	8.00	20.0	40.0
sec-Butyl Alcohol	TBAd 9	Ave	++++ 364867	++++ 879107	15269	44134	105977	++++ 450	++++ 900	30.0	75.0	150
cis-1,2-Dichloroethene	FB	Ave	11171 1228313	34237 2611299	70791	193939	394339	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	16343 1799215	47122 3819943	92392	261621	538946	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	3613 392835	10547 834492	22263	62730	126502	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	20495 2219697	62667 4681916	128741	351600	714167	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Lin2	++++ 240320	5275 547955	11693	33616	74496	++++ 60.0	2.00 120	4.00	10.0	20.0
Isobutyl alcohol	TBAd 9	Ave	++++ 284397	++++ 616900	13027	35197	79087	++++ 750	++++ 1500	50.0	125	250
1,1,1-Trichloroethane	FB	Ave	16254 2095744	52574 4469734	105875	303220	631534	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexane	FB	Ave	22193 2768823	73685 5744473	146667	428524	874764	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	17474 1999530	57211 4138584	114298	318183	647705	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	15704 2007018	48555 4246634	100662	288085	602295	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	12284 1319327	34344 2782930	76517	201911	415304	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	45182 4827572	143102 9941485	287201	788147	1576485	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	12859 1354468	38160 2871797	79212	208822	428287	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	19836 2337255	65645 4739195	130035	360427	739118	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	11190 1081254	30795 2279373	63518	172670	350928	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	++++ 71379	++++ 152981	2990	9167	22961	++++ 600	++++ 1200	40.0	100	200
Dibromomethane	FB	Ave	3462 416921	11553 899386	22254	64292	131874	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	10143 1359784	32230 2958024	66682	198107	417686	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin1	++++ 174776	++++ 453021	5331	15688	43337	++++ 30.0	++++ 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Lin1	8261 1434208	27477 3185401	61223	191170	420648	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Lin2	++++ 1781569	37709 3850227	83797	254201	539538	++++ 120	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	46214 5111912	141963 10254291	296944	826443	1654810	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin2	++++ 627987	9380 1409212	24207	75284	173115	++++ 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Lin1	++++ 1083296	20015 2367868	42203	140562	310767	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	4874 547783	15242 1157521	31299	84817	171854	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Lin2	++++ 1191255	23062 2582875	52082	163818	344423	++++ 120	4.00 240	8.00	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	9264 1025882	27065 2138492	56631	162081	327822	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	9885 1028675	30655 2096968	60854	164356	330435	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Lin1	3625 678878	12988 1517365	30029	88258	195292	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	3401 510658	12464 1112354	25697	73426	156551	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	6970 932598	20245 1962990	40402	129067	276505	0.150 15.0	0.500 30.0	1.00	2.50	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	29507 2924205	87050 5959104	176467	465169	940728	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	17146 1841594	53178 3719477	105337	292033	598539	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	6830 944749	22158 2001840	47130	135636	287544	0.300 30.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	19180 2275419	61599 4701178	127285	359578	726763	0.300 30.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	17557 2098726	53246 4223788	115878	341307	681056	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	++++ 3017633	66702 6228729	142452	446978	943083	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Lin1	++++ 276924	4764 636885	10310	33773	75996	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	51814 6163253	160358 11996025	331380	972824	1990521	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Lin2	++++ 555670	10271 1205475	23158	68222	156005	++++ 1200	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	4461 583124	14927 1240368	30979	88141	179605	0.300 30.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	++++ 180730	3211 408683	6773	22819	49653	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	1253 165059	4170 349349	9100	24948	52530	0.300 30.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	12640 1694532	43903 3386025	94686	277541	554844	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	9280 1076757	29160 2209089	62995	178105	356192	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	35557 5129544	128116 10127946	279514	812245	1651728	0.300 30.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	10993 1307492	38161 2679819	77678	217293	425818	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	11024 1362285	35913 2831211	72441	218461	434179	0.300 30.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	35416 5192939	125057 10369842	273437	806949	1657183	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	36151 5203293	135308 10366889	284954	834647	1680611	0.300 30.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	10241 1419029	36891 2885998	77940	221515	452846	0.300 30.0	1.00 60.0	2.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	39621 5889996	150030 11580973	319221	934269	1892331	0.300 30.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 347337
SDG No.: _____
Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm)) Heated Purge: (Y/N) N
Calibration Start Date: 10/20/2016 09:54 Calibration End Date: 10/20/2016 11:51 Calibration ID: 27333

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,3-Dichlorobenzene	DCBd 4	Ave	20177 2463931	68117 5102970	140356	390017	788759	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	22533 2400706	69093 4908233	139251	386795	765468	0.300 30.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	45637 6330118	157266 12256524	338103	984634	2023580	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	16221 2029849	56276 4218856	111341	316457	643204	0.300 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin1	++++ 80077	1236 180374	3291	9385	21383	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	10649 1446297	33806 3011469	69127	204962	429673	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	8851 1137657	31278 2320803	59432	168274	346487	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Lin1	++++ 1887777	32687 4032452	86039	227681	517402	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	7145 1092933	25362 2307781	55161	154842	327940	0.300 30.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	++++ 1007071	34356 2158139	62953	172453	323116	++++ 30.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	++++ 1036188	38171 2196751	67656	186103	336595	++++ 30.0	1.00 60.0	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	++++ 4174064	139302 8501726	256168	725763	1353308	++++ 30.0	1.00 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	++++ 1511596	51533 3180421	93837	263317	479660	++++ 30.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2900.D
 Lims ID: STD003
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 20-Oct-2016 09:54:30 ALS Bottle#: 11 Worklist Smp#: 10
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD003
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:23 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 10:42:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.644	0.006	90	142719	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.617	-0.001	97	1538400	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.884	-0.001	93	315386	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.713	11.707	0.006	97	466994	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.074	-0.001	89	16406	0.3000	0.4854	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.373	7.367	0.006	99	19491	0.3000	0.5440	
\$ 7 Toluene-d8 (Surr)	98	8.810	8.804	0.006	96	64267	0.3000	0.4669	
\$ 8 4-Bromofluorobenzene (Surr	95	10.755	10.749	0.006	82	29575	0.3000	0.6194	
23 Dichlorodifluoromethane	85	3.875	3.873	0.002	91	16290	0.3000	0.2753	
26 Chloromethane	50	4.098	4.096	0.002	96	17692	0.3000	0.3787	
27 Vinyl chloride	62	4.252	4.250	0.002	83	13592	0.3000	0.3145	
29 Bromomethane	94	4.615	4.613	0.002	93	8414	0.3000	0.3217	
30 Chloroethane	64	4.685	4.683	0.002	95	9549	0.3000	0.3687	
31 Dichlorofluoromethane	67	4.852	4.850	0.002	98	24667	0.3000	0.3189	
32 Trichlorofluoromethane	101	4.950	4.948	0.002	98	21387	0.3000	0.2804	
35 Ethyl ether	59		5.102				ND	ND	
39 Acrolein	56	5.271	5.255	0.016	36	2475	3.00	2.45	
40 1,1,2-Trichloro-1,2,2-trif	151	5.369	5.353	0.016	95	10565	0.3000	0.2987	
41 Acetone	43	5.369	5.367	0.002	68	13583	1.20	2.80	
43 1,1-Dichloroethene	96	5.397	5.409	-0.012	92	12380	0.3000	0.2874	
44 Iodomethane	142	5.586	5.586	0.000	93	18596	0.3000	0.3177	
45 Methyl acetate	43	5.607	5.601	0.006	97	16260	1.50	1.63	
47 3-Chloro-1-propene	41	5.657	5.651	0.006	50	21948	0.3000	0.2810	
48 Carbon disulfide	76	5.700	5.694	0.006	96	42282	0.3000	0.2853	
49 2-Methyl-2-propanol	59	5.714	5.715	-0.001	34	2207	3.00	2.69	
50 Methylene Chloride	84	5.764	5.751	0.013	97	44551	0.3000	0.3586	
51 Methyl tert-butyl ether	73	5.922	5.922	0.000	95	14482	0.3000	0.2779	
52 Acrylonitrile	53	5.936	5.922	0.014	72	9170	3.00	2.31	
53 trans-1,2-Dichloroethene	96	5.972	5.965	0.007	93	12085	0.3000	0.2936	
54 Hexane	57	6.122	6.123	-0.001	91	21534	0.3000	0.3048	
55 Vinyl acetate	43	6.236	6.230	0.006	97	14807	0.6000	1.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.301	6.294	0.007	94	23459	0.3000	0.2978	
61 2-Butanone (MEK)	43		6.688				ND	ND	
62 sec-Butyl Alcohol	45		6.730				ND	ND	
63 cis-1,2-Dichloroethene	96	6.737	6.730	0.007	87	11171	0.3000	0.2899	
64 2,2-Dichloropropane	77	6.751	6.752	-0.001	80	16343	0.3000	0.3032	
67 Chlorobromomethane	128	6.944	6.931	0.013	56	3613	0.3000	0.2943	
68 Chloroform	83	6.944	6.938	0.006	93	20495	0.3000	0.2931	
69 Tetrahydrofuran	42		6.959				ND	ND	
70 Isobutyl alcohol	41		7.145				ND	ND	
71 1,1,1-Trichloroethane	97	7.152	7.152	0.000	95	16254	0.3000	0.2663	
72 Cyclohexane	56	7.223	7.217	0.006	96	22193	0.3000	0.2668	
73 1,1-Dichloropropene	75	7.259	7.252	0.007	93	17474	0.3000	0.2798	
74 Carbon tetrachloride	117	7.287	7.288	-0.001	94	15704	0.3000	0.2707	
76 1,2-Dichloroethane	62	7.430	7.424	0.006	26	12284	0.3000	0.3008	a
77 Benzene	78	7.445	7.438	0.007	99	45182	0.3000	0.2925	
14 n-Heptane	43	7.502	7.495	0.007	91	21571	0.3000	0.2615	
79 Trichloroethene	95	7.909	7.903	0.006	88	12859	0.3000	0.3016	
80 2-Pentanone	43	7.974	7.960	0.014	1	7845	NC	NC	a
82 Methylcyclohexane	55	8.088	8.082	0.006	86	19836	0.3000	0.2775	
83 1,2-Dichloropropane	63	8.103	8.096	0.007	62	11190	0.3000	0.3213	
84 1,4-Dioxane	88		8.153				ND	ND	
85 Dibromomethane	93	8.210	8.203	0.007	87	3462	0.3000	0.2719	
86 Dichlorobromomethane	83	8.274	8.268	0.006	95	10143	0.3000	0.2584	
87 2-Chloroethyl vinyl ether	63		8.411				ND	ND	
89 cis-1,3-Dichloropropene	75	8.596	8.589	0.007	87	8261	0.3000	0.4190	
90 4-Methyl-2-pentanone (MIBK)	43	8.653	8.640	0.013	97	10803	1.20	2.11	
91 Toluene	91	8.860	8.854	0.006	97	46214	0.3000	0.2892	
92 Ethyl methacrylate	69		8.940				ND	ND	
93 trans-1,3-Dichloropropene	75		8.961				ND	ND	
94 1,1,2-Trichloroethane	97	9.125	9.119	0.006	89	4874	0.3000	0.2869	
95 2-Hexanone	43		9.233				ND	ND	
96 1,3-Dichloropropane	76	9.261	9.254	0.007	73	9264	0.3000	0.2950	
97 Tetrachloroethene	164	9.268	9.269	-0.001	88	9885	0.3000	0.3033	
98 Chlorodibromomethane	129	9.454	9.447	0.007	84	3625	0.3000	0.4176	
100 Ethylene Dibromide	107	9.583	9.576	0.007	90	3401	0.3000	0.2344	
101 1-Chlorohexane	91	9.797	9.784	0.013	77	6970	0.1500	0.1363	
102 Chlorobenzene	112	9.912	9.905	0.007	94	29507	0.3000	0.3155	
103 Ethylbenzene	106	9.940	9.934	0.006	98	17146	0.3000	0.2980	
104 1,1,1,2-Tetrachloroethane	131	9.947	9.941	0.006	70	6830	0.3000	0.2550	
105 m-Xylene & p-Xylene	106	10.019	10.012	0.007	99	19180	0.3000	0.2768	
107 o-Xylene	106	10.333	10.327	0.006	92	17557	0.3000	0.2769	
106 Styrene	104	10.341	10.334	0.007	75	18787	0.3000	0.2166	
108 Bromoform	173		10.541				ND	ND	
109 Isopropylbenzene	105	10.591	10.584	0.007	74	51814	0.3000	0.2935	
111 Cyclohexanone	55		10.734				ND	ND	
112 1,1,2,2-Tetrachloroethane	83	10.812	10.806	0.006	89	4461	0.3000	0.2718	
113 trans-1,4-Dichloro-2-buten	53		10.842				ND	ND	
114 1,2,3-Trichloropropane	110	10.884	10.877	0.007	75	1253	0.3000	0.2680	
115 N-Propylbenzene	120	10.913	10.906	0.007	99	12640	0.3000	0.2604	
116 Bromobenzene	156	10.920	10.913	0.007	97	9280	0.3000	0.2897	
117 1,3,5-Trimethylbenzene	105	11.020	11.013	0.007	93	35557	0.3000	0.2485	
118 2-Chlorotoluene	126	11.041	11.035	0.006	94	10993	0.3000	0.2806	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.113	11.106	0.007	98	11024	0.3000	0.2813	
120 tert-Butylbenzene	119	11.320	11.314	0.006	93	35416	0.3000	0.2479	
121 1,2,4-Trimethylbenzene	105	11.349	11.342	0.007	95	36151	0.3000	0.2466	
122 sec-Butylbenzene	134	11.492	11.492	0.000	96	10241	0.3000	0.2557	
123 4-Isopropyltoluene	119	11.585	11.585	0.000	95	39621	0.3000	0.2417	
124 1,3-Dichlorobenzene	146	11.663	11.664	-0.001	94	20177	0.3000	0.2803	
126 1,4-Dichlorobenzene	146	11.735	11.728	0.007	94	22533	0.3000	0.3125	
127 n-Butylbenzene	91	11.956	11.950	0.006	98	45637	0.3000	0.2598	
128 1,2-Dichlorobenzene	146	12.099	12.093	0.006	92	16221	0.3000	0.2766	
129 1,2-Dibromo-3-Chloropropan	157		12.851				ND	ND	
130 1,2,4-Trichlorobenzene	180	13.801	13.795	0.006	91	10649	0.3000	0.2746	
131 Hexachlorobutadiene	225	13.937	13.931	0.006	92	8851	0.3000	0.2768	
132 Naphthalene	128		14.167				ND	ND	
133 1,2,3-Trichlorobenzene	180	14.502	14.488	0.014	87	7145	0.3000	0.2450	
S 140 1,2-Dichloroethene, Total	96				0		0.6000	0.5836	
S 138 1,2-Dichloroethene, Total	1				0		0.6000	0.5836	
S 139 Xylenes, Total	106				0		0.6000	0.5537	
S 137 1,3-Dichloropropene, Total	1				0		0.6000	0.4190	
S 134 Trihalomethanes, Total	1				0		1.20	0.9691	
S 135 Xylenes, Total (URS)	1				0		0.6000	0.5537	
S 136 Total BTEX	1				0			1.43	

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

MV-Gas/Ket A_00052	Amount Added: 0.15	Units: uL
MV-Main A_00027	Amount Added: 0.15	Units: uL
MV-2cleve+AVA_00017	Amount Added: 0.15	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.02	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2900.D

Injection Date: 20-Oct-2016 09:54:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD003

Worklist Smp#: 10

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

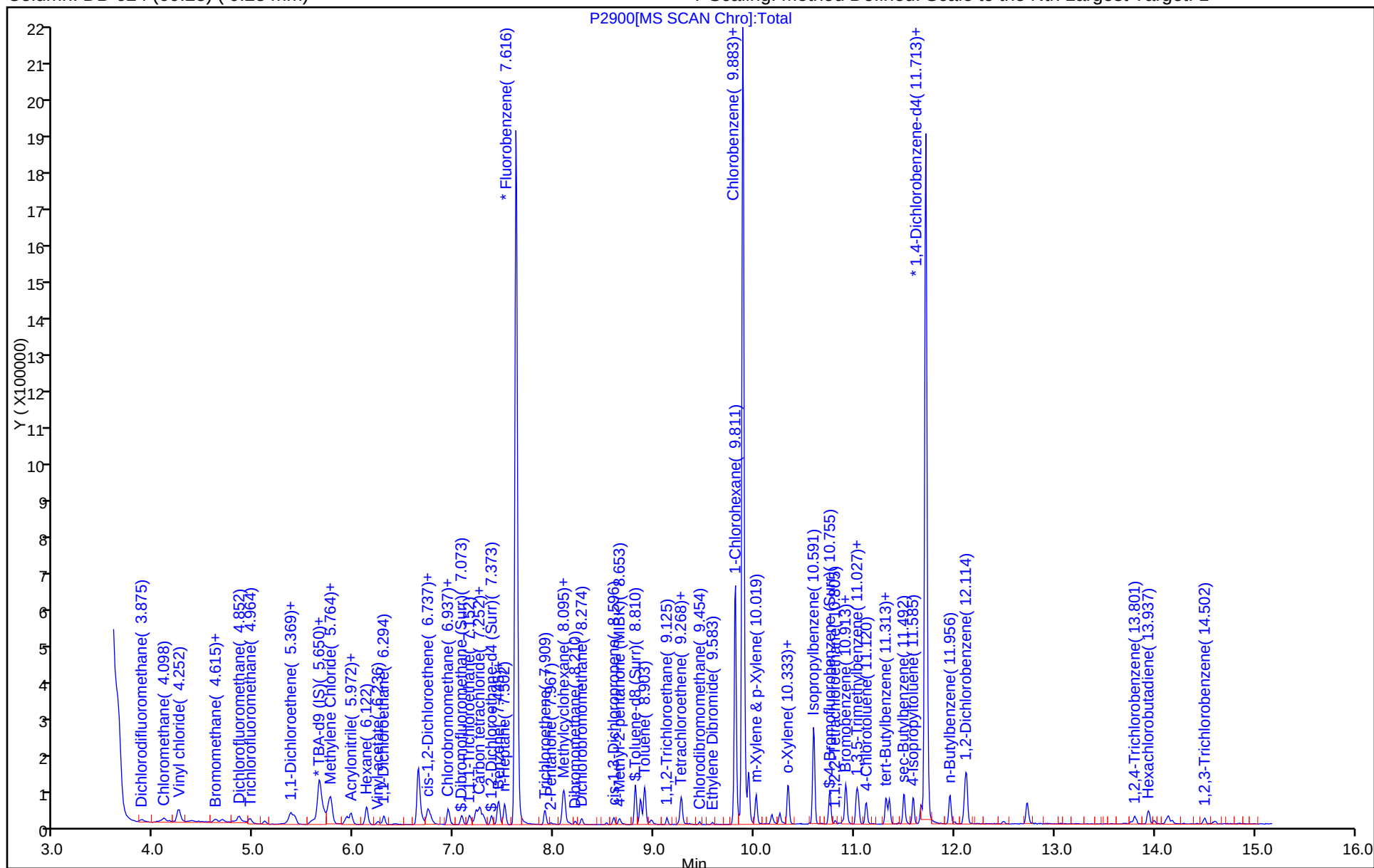
ALS Bottle#: 11

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

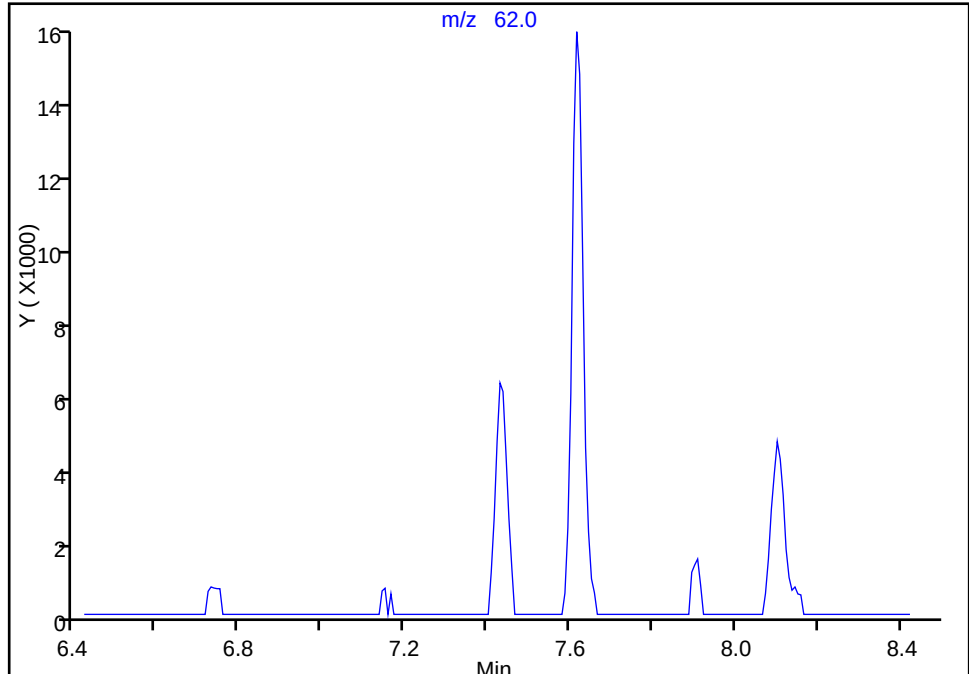
Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2900.D
Injection Date: 20-Oct-2016 09:54:30 Instrument ID: VMS_P
Lims ID: STD003
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector: MS SCAN

76 1,2-Dichloroethane, CAS: 107-06-2

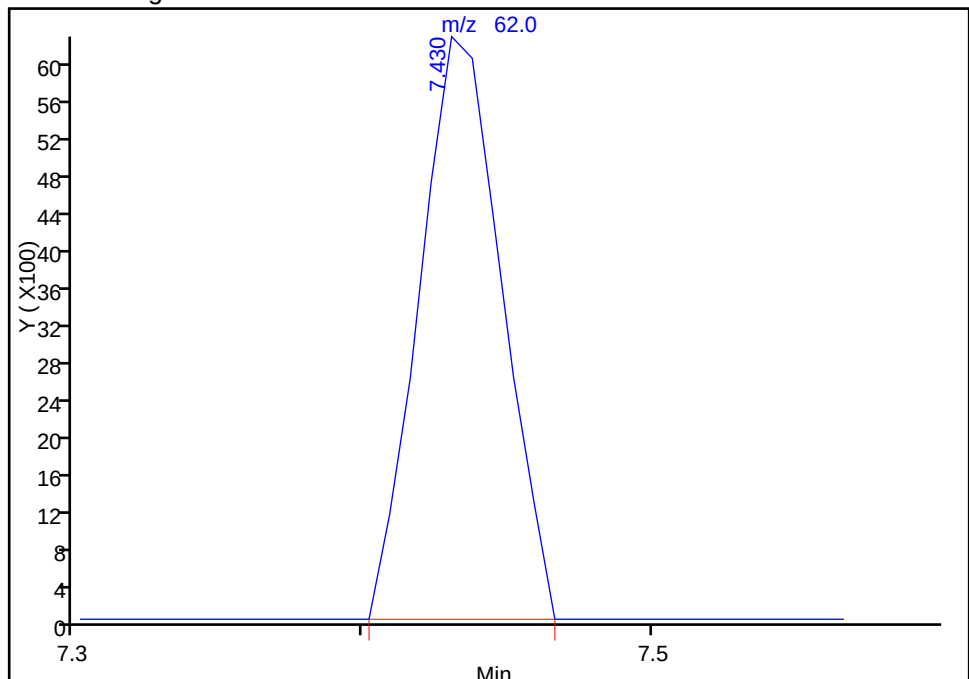
Signal: 1

Not Detected
Expected RT: 7.42

Processing Integration Results



Manual Integration Results



RT: 7.43
Area: 12284
Amount: 0.300789
Amount Units: ug/l

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2901.D
 Lims ID: STD010
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 20-Oct-2016 10:14:30 ALS Bottle#: 12 Worklist Smp#: 11
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD010
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:31 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 10:43:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.644	5.644	0.000	89	142809	250.0	250.0	
* 1 Fluorobenzene	96	7.618	7.617	0.001	97	1460907	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	91	300386	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.707	11.707	0.000	97	462975	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.067	7.074	-0.007	91	34356	1.00	1.07	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.367	7.367	0.000	99	38171	1.00	1.12	
\$ 7 Toluene-d8 (Surr)	98	8.804	8.804	0.000	96	139302	1.00	1.06	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	81	51533	1.00	1.09	
23 Dichlorodifluoromethane	85	3.873	3.873	0.000	99	50709	1.00	0.9024	
26 Chloromethane	50	4.082	4.096	-0.014	98	44650	1.00	1.01	
27 Vinyl chloride	62	4.236	4.250	-0.014	76	40075	1.00	0.9763	
29 Bromomethane	94	4.613	4.613	0.000	97	24814	1.00	1.00	
30 Chloroethane	64	4.669	4.683	-0.014	95	24071	1.00	0.9786	
31 Dichlorofluoromethane	67	4.837	4.850	-0.013	99	72059	1.00	0.9809	
32 Trichlorofluoromethane	101	4.948	4.948	0.000	98	70262	1.00	0.9699	
35 Ethyl ether	59	5.088	5.102	-0.014	83	16582	1.00	0.8979	a
39 Acrolein	56	5.256	5.255	0.001	97	8513	10.0	8.89	
40 1,1,2-Trichloro-1,2,2-trif	151	5.353	5.353	0.000	95	34345	1.00	1.02	
41 Acetone	43	5.353	5.367	-0.014	54	20826	4.00	4.52	
43 1,1-Dichloroethene	96	5.395	5.409	-0.014	94	40598	1.00	0.99	
44 Iodomethane	142	5.573	5.586	-0.013	97	52735	1.00	0.9488	
45 Methyl acetate	43	5.601	5.601	0.000	96	43687	5.00	4.60	
47 3-Chloro-1-propene	41	5.644	5.651	-0.007	77	65581	1.00	0.8842	
48 Carbon disulfide	76	5.694	5.694	0.000	99	128341	1.00	0.9120	
49 2-Methyl-2-propanol	59	5.708	5.715	-0.007	33	6707	10.0	8.15	
50 Methylene Chloride	84	5.751	5.751	0.000	98	58832	1.00	0.8590	
51 Methyl tert-butyl ether	73	5.916	5.922	-0.006	94	43193	1.00	0.8728	
52 Acrylonitrile	53	5.923	5.922	0.001	79	32733	10.0	8.68	
53 trans-1,2-Dichloroethene	96	5.966	5.965	0.001	94	39399	1.00	1.01	
54 Hexane	57	6.116	6.123	-0.007	92	61063	1.00	0.9076	
55 Vinyl acetate	43	6.230	6.230	0.000	98	50672	2.00	2.11	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.288	6.294	-0.006	97	73155	1.00	0.9779	
61 2-Butanone (MEK)	43	6.681	6.688	-0.007	98	16894	4.00	4.11	
62 sec-Butyl Alcohol	45	6.731	6.730	0.001	38	2657	15.0	4.27	
63 cis-1,2-Dichloroethene	96	6.731	6.730	0.001	86	34237	1.00	0.9358	
64 2,2-Dichloropropane	77	6.752	6.752	0.000	78	47122	1.00	0.9205	
67 Chlorobromomethane	128	6.931	6.931	0.000	89	10547	1.00	0.9046	
68 Chloroform	83	6.938	6.938	0.000	96	62667	1.00	0.9437	
69 Tetrahydrofuran	42	6.960	6.959	0.001	74	5275	2.00	2.07	
70 Isobutyl alcohol	41		7.145				ND	ND	
71 1,1,1-Trichloroethane	97	7.146	7.152	-0.006	95	52574	1.00	0.9070	
72 Cyclohexane	56	7.210	7.217	-0.007	93	73685	1.00	0.9327	
73 1,1-Dichloropropene	75	7.253	7.252	0.001	93	57211	1.00	0.9646	
74 Carbon tetrachloride	117	7.289	7.288	0.001	95	48555	1.00	0.8812	
76 1,2-Dichloroethane	62	7.424	7.424	0.000	82	34344	1.00	0.8856	
77 Benzene	78	7.439	7.438	0.001	99	143102	1.00	0.9755	
14 n-Heptane	43	7.503	7.495	0.008	93	71275	1.00	0.9100	
79 Trichloroethene	95	7.904	7.903	0.001	94	38160	1.00	0.9426	
80 2-Pentanone	43	7.968	7.960	0.008	96	13540	NC	NC	
82 Methylcyclohexane	55	8.082	8.082	0.000	89	65645	1.00	0.9671	
83 1,2-Dichloropropane	63	8.097	8.096	0.001	84	30795	1.00	0.9313	
84 1,4-Dioxane	88		8.153				ND	ND	
85 Dibromomethane	93	8.204	8.203	0.001	87	11553	1.00	0.9556	
86 Dichlorobromomethane	83	8.268	8.268	0.000	97	32230	1.00	0.8648	
87 2-Chloroethyl vinyl ether	63		8.411				ND	ND	
89 cis-1,3-Dichloropropene	75	8.590	8.589	0.001	87	27477	1.00	0.8702	
90 4-Methyl-2-pentanone (MIBK)	43	8.647	8.640	0.007	98	37709	4.00	4.14	
91 Toluene	91	8.854	8.854	0.000	95	141963	1.00	0.9354	
92 Ethyl methacrylate	69	8.947	8.940	0.007	90	9380	1.00	1.05	
93 trans-1,3-Dichloropropene	75	8.962	8.961	0.001	96	20015	1.00	1.16	
94 1,1,2-Trichloroethane	97	9.119	9.119	0.000	93	15242	1.00	0.9449	
95 2-Hexanone	43	9.233	9.233	0.000	96	23062	4.00	4.15	
96 1,3-Dichloropropane	76	9.255	9.254	0.001	96	27065	1.00	0.9047	
97 Tetrachloroethene	164	9.262	9.269	-0.007	89	30655	1.00	0.9874	
98 Chlorodibromomethane	129	9.448	9.447	0.001	87	12988	1.00	0.8802	
100 Ethylene Dibromide	107	9.577	9.576	0.001	97	12464	1.00	0.9020	
101 1-Chlorohexane	91	9.784	9.784	0.000	79	20245	0.5000	0.4157	
102 Chlorobenzene	112	9.906	9.905	0.001	95	87050	1.00	0.9771	
103 Ethylbenzene	106	9.934	9.934	0.000	98	53178	1.00	0.9705	
104 1,1,1,2-Tetrachloroethane	131	9.941	9.941	0.000	41	22158	1.00	0.8686	
105 m-Xylene & p-Xylene	106	10.013	10.012	0.001	99	61599	1.00	0.9334	
107 o-Xylene	106	10.335	10.327	0.008	98	53246	1.00	0.8818	
106 Styrene	104	10.335	10.334	0.001	85	66702	1.00	0.8073	
108 Bromoform	173	10.542	10.541	0.001	87	4764	1.00	1.22	
109 Isopropylbenzene	105	10.585	10.584	0.001	97	160358	1.00	0.9164	
111 Cyclohexanone	55	10.742	10.734	0.008	95	10271	40.0	42.0	
112 1,1,2,2-Tetrachloroethane	83	10.806	10.806	0.000	94	14927	1.00	0.9174	
113 trans-1,4-Dichloro-2-buten	53	10.835	10.842	-0.007	57	3211	1.00	1.23	
114 1,2,3-Trichloropropane	110	10.871	10.877	-0.006	90	4170	1.00	0.8996	
115 N-Propylbenzene	120	10.907	10.906	0.001	98	43903	1.00	0.9123	
116 Bromobenzene	156	10.914	10.913	0.001	95	29160	1.00	0.9182	
117 1,3,5-Trimethylbenzene	105	11.014	11.013	0.001	94	128116	1.00	0.9031	
118 2-Chlorotoluene	126	11.035	11.035	0.000	94	38161	1.00	0.9824	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.114	11.106	0.008	99	35913	1.00	0.9244	
120 tert-Butylbenzene	119	11.314	11.314	0.000	92	125057	1.00	0.8831	
121 1,2,4-Trimethylbenzene	105	11.343	11.342	0.001	96	135308	1.00	0.9310	
122 sec-Butylbenzene	134	11.493	11.492	0.001	96	36891	1.00	0.9291	
123 4-Isopropyltoluene	119	11.586	11.585	0.001	97	150030	1.00	0.9232	
124 1,3-Dichlorobenzene	146	11.664	11.664	0.000	94	68117	1.00	0.9544	
126 1,4-Dichlorobenzene	146	11.729	11.728	0.001	91	69093	1.00	0.9666	
127 n-Butylbenzene	91	11.950	11.950	0.000	98	157266	1.00	0.9031	
128 1,2-Dichlorobenzene	146	12.093	12.093	0.000	93	56276	1.00	0.9680	
129 1,2-Dibromo-3-Chloropropan	157	12.844	12.851	-0.007	61	1236	1.00	1.20	
130 1,2,4-Trichlorobenzene	180	13.795	13.795	0.000	91	33806	1.00	0.8793	
131 Hexachlorobutadiene	225	13.938	13.931	0.007	93	31278	1.00	0.9865	
132 Naphthalene	128	14.174	14.167	0.007	97	32687	1.00	1.12	
133 1,2,3-Trichlorobenzene	180	14.496	14.488	0.008	93	25362	1.00	0.8772	
S 140 1,2-Dichloroethene, Total	96				0		2.00	1.94	
S 138 1,2-Dichloroethene, Total	1				0		2.00	1.94	
S 139 Xylenes, Total	106				0		2.00	1.82	
S 137 1,3-Dichloropropene, Total	1				0		2.00	2.03	
S 134 Trihalomethanes, Total	1				0		4.00	3.91	
S 135 Xylenes, Total (URS)	1				0		2.00	1.82	
S 136 Total BTEX	1				0			4.70	

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

MV-Gas/Ket A_00052	Amount Added: 0.50	Units: uL
MV-Main A_00027	Amount Added: 0.50	Units: uL
MV-2cleve+AVA_00017	Amount Added: 0.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.08	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2901.D

Injection Date: 20-Oct-2016 10:14:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD010

Worklist Smp#: 11

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

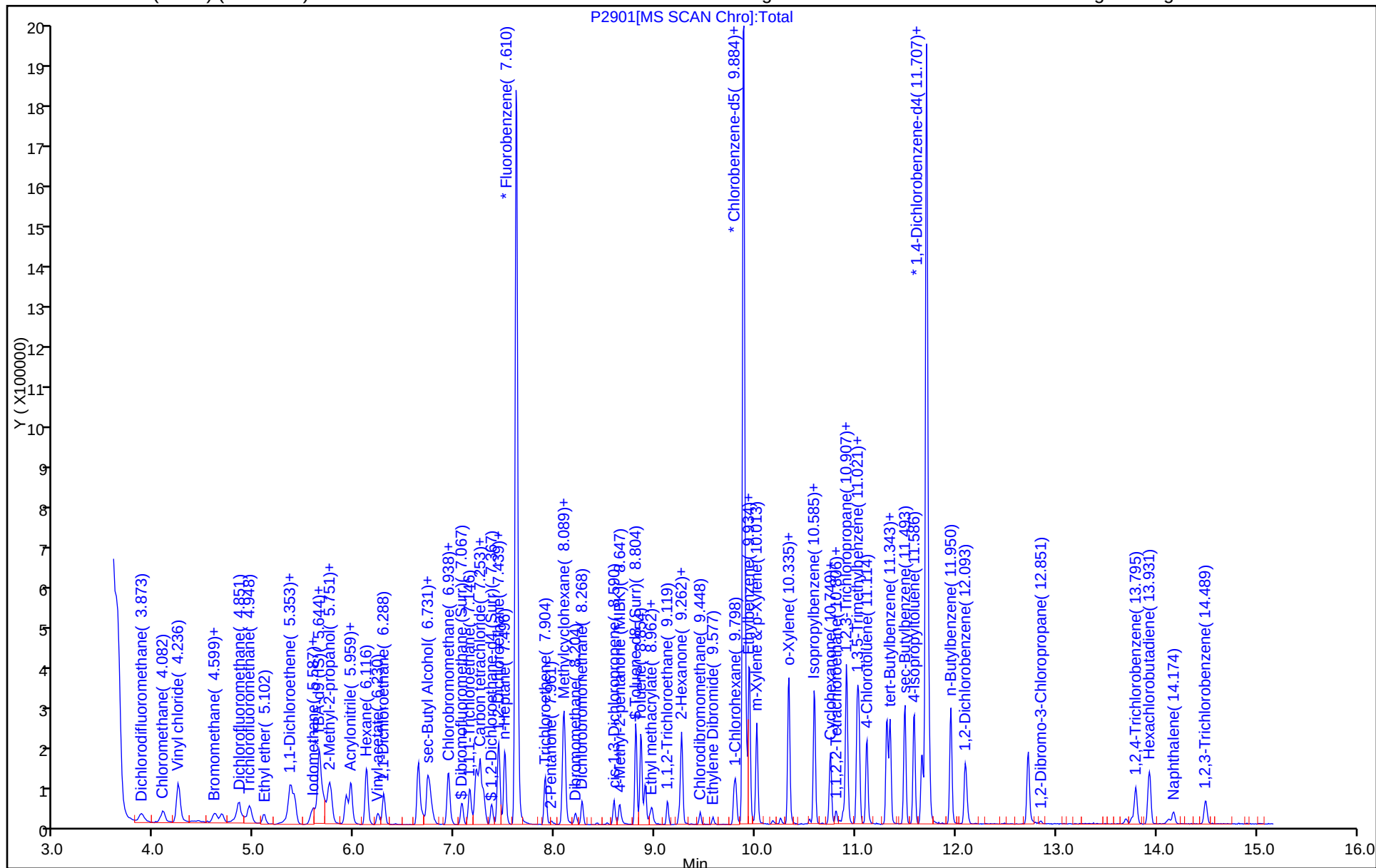
ALS Bottle#: 12

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

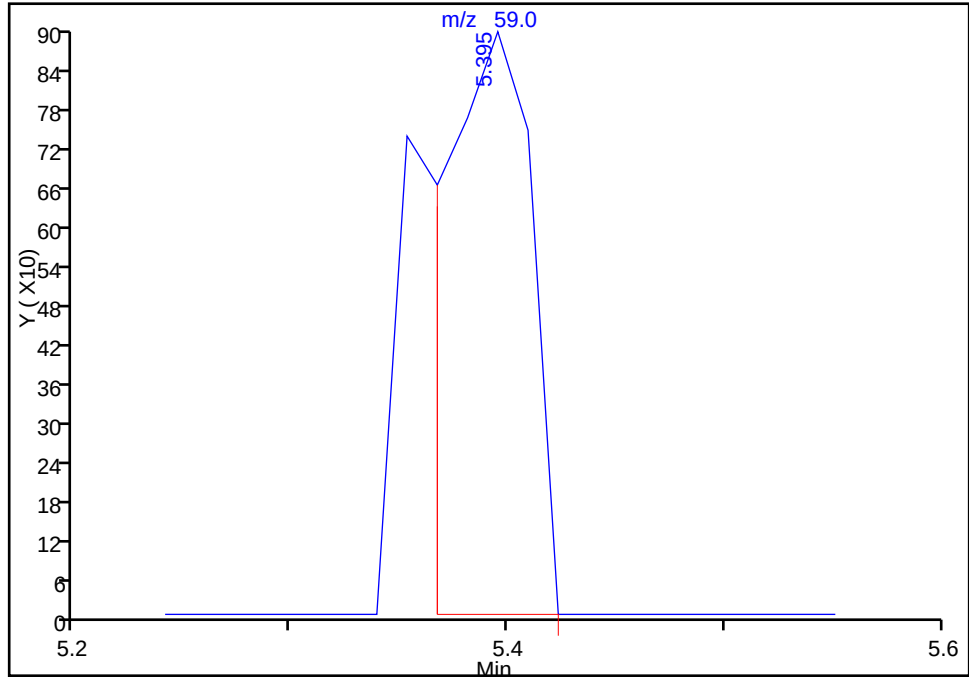
Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2901.D
Injection Date: 20-Oct-2016 10:14:30 Instrument ID: VMS_P
Lims ID: STD010
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector: MS SCAN

35 Ethyl ether, CAS: 60-29-7

Signal: 1

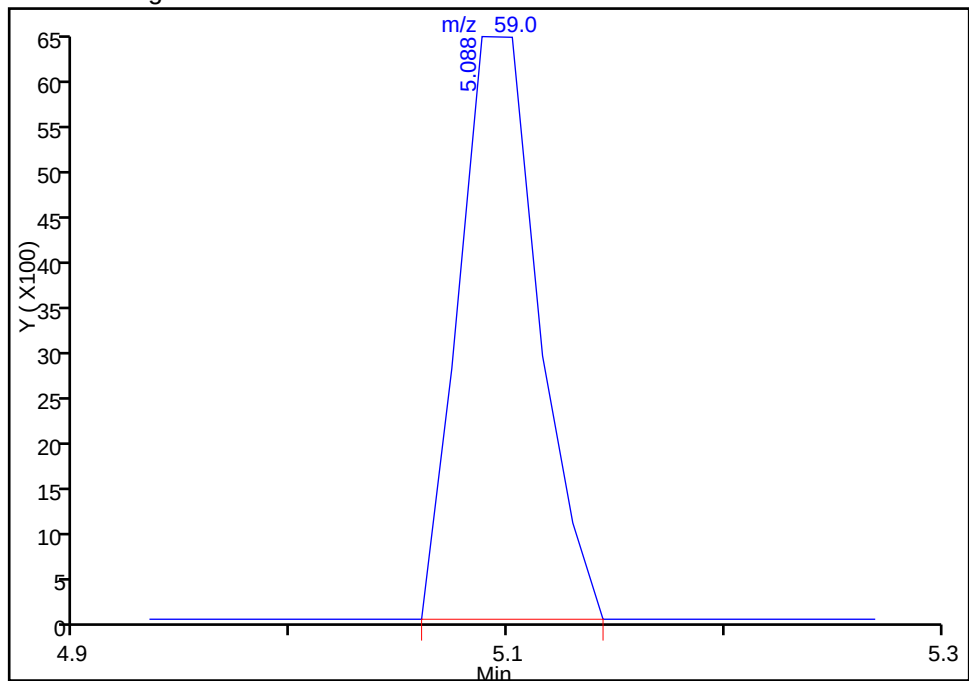
RT: 5.40
Area: 2559
Amount: 0.201600
Amount Units: ug/l

Processing Integration Results



RT: 5.09
Area: 16582
Amount: 0.897905
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 20-Oct-2016 16:47:27

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2902.D
 Lims ID: STD020
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 20-Oct-2016 10:33:30 ALS Bottle#: 13 Worklist Smp#: 12
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD020
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:38 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 11:39:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.644	0.006	87	141973	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.617	-0.001	97	1469180	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.884	-0.001	91	297427	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.707	-0.001	97	464435	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.074	-0.001	91	62953	2.00	1.95	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.367	-0.001	99	67656	2.00	1.98	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.804	-0.001	96	256168	2.00	1.97	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.749	-0.001	82	93837	2.00	1.98	
23 Dichlorodifluoromethane	85	3.873	3.873	0.000	99	96155	2.00	1.70	
26 Chloromethane	50	4.097	4.096	0.001	99	82710	2.00	1.85	
27 Vinyl chloride	62	4.250	4.250	0.000	84	76768	2.00	1.86	
29 Bromomethane	94	4.613	4.613	0.000	96	47436	2.00	1.90	
30 Chloroethane	64	4.683	4.683	0.000	96	47405	2.00	1.92	
31 Dichlorofluoromethane	67	4.851	4.850	0.001	99	145217	2.00	1.97	
32 Trichlorofluoromethane	101	4.949	4.948	0.000	99	140187	2.00	1.92	
35 Ethyl ether	59	5.102	5.102	0.000	84	35317	2.00	1.90	a
39 Acrolein	56	5.256	5.255	0.001	95	17201	20.0	17.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.354	5.353	0.001	95	64530	2.00	1.91	
41 Acetone	43	5.367	5.367	0.000	53	39728	8.00	8.58	
43 1,1-Dichloroethene	96	5.395	5.409	-0.014	93	77428	2.00	1.88	
44 Iodomethane	142	5.578	5.586	-0.008	97	103695	2.00	1.86	
45 Methyl acetate	43	5.600	5.601	-0.001	98	93094	10.0	9.75	
47 3-Chloro-1-propene	41	5.650	5.651	-0.001	85	139190	2.00	1.87	
48 Carbon disulfide	76	5.693	5.694	-0.001	100	257992	2.00	1.82	
49 2-Methyl-2-propanol	59	5.714	5.715	-0.001	89	17025	20.0	20.8	
50 Methylene Chloride	84	5.750	5.751	-0.001	97	91235	2.00	1.82	
51 Methyl tert-butyl ether	73	5.914	5.922	-0.008	95	92588	2.00	1.86	
52 Acrylonitrile	53	5.921	5.922	-0.001	78	72453	20.0	19.1	
53 trans-1,2-Dichloroethene	96	5.964	5.965	-0.001	94	74499	2.00	1.90	
54 Hexane	57	6.122	6.123	-0.001	92	127077	2.00	1.91	
55 Vinyl acetate	43	6.236	6.230	0.006	97	105325	4.00	3.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.293	6.294	-0.001	98	144454	2.00	1.92	
61 2-Butanone (MEK)	43	6.687	6.688	-0.002	99	39402	8.00	7.45	
62 sec-Butyl Alcohol	45	6.737	6.730	0.007	37	15269	30.0	24.7	
63 cis-1,2-Dichloroethene	96	6.729	6.730	-0.001	88	70791	2.00	1.92	
64 2,2-Dichloropropane	77	6.751	6.752	-0.001	81	92392	2.00	1.79	
67 Chlorobromomethane	128	6.937	6.931	0.006	89	22263	2.00	1.90	
68 Chloroform	83	6.937	6.938	-0.001	96	128741	2.00	1.93	
69 Tetrahydrofuran	42	6.965	6.959	0.006	88	11693	4.00	3.78	
70 Isobutyl alcohol	41	7.151	7.145	0.006	36	13027	50.0	45.5	
71 1,1,1-Trichloroethane	97	7.151	7.152	-0.001	96	105875	2.00	1.82	
72 Cyclohexane	56	7.216	7.217	-0.001	96	146667	2.00	1.85	
73 1,1-Dichloropropene	75	7.251	7.252	-0.001	91	114298	2.00	1.92	
74 Carbon tetrachloride	117	7.287	7.288	-0.001	96	100662	2.00	1.82	
76 1,2-Dichloroethane	62	7.430	7.424	0.006	98	76517	2.00	1.96	
77 Benzene	78	7.437	7.438	-0.001	98	287201	2.00	1.95	
14 n-Heptane	43	7.502	7.495	0.007	93	147889	2.00	1.88	
79 Trichloroethene	95	7.902	7.903	-0.001	94	79212	2.00	1.95	
80 2-Pentanone	43	7.959	7.960	-0.001	96	58895	NC	NC	
82 Methylcyclohexane	55	8.088	8.082	0.006	95	130035	2.00	1.90	
83 1,2-Dichloropropane	63	8.095	8.096	-0.001	86	63518	2.00	1.91	
84 1,4-Dioxane	88	8.152	8.153	-0.001	44	2990	40.0	40.6	
85 Dibromomethane	93	8.202	8.203	-0.001	93	22254	2.00	1.83	
86 Dichlorobromomethane	83	8.274	8.268	0.006	98	66682	2.00	1.78	
87 2-Chloroethyl vinyl ether	63	8.410	8.411	-0.001	88	5331	2.00	2.58	
89 cis-1,3-Dichloropropene	75	8.588	8.589	-0.001	89	61223	2.00	1.66	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.640	0.006	98	83797	8.00	7.50	
91 Toluene	91	8.860	8.854	0.006	97	296944	2.00	1.95	
92 Ethyl methacrylate	69	8.946	8.940	0.006	91	24207	2.00	1.87	
93 trans-1,3-Dichloropropene	75	8.967	8.961	0.006	97	42203	2.00	1.82	
94 1,1,2-Trichloroethane	97	9.125	9.119	0.006	95	31299	2.00	1.93	
95 2-Hexanone	43	9.232	9.233	-0.001	97	52082	8.00	7.49	
96 1,3-Dichloropropane	76	9.261	9.254	0.007	97	56631	2.00	1.91	
97 Tetrachloroethene	164	9.268	9.269	-0.001	91	60854	2.00	1.98	
98 Chlorodibromomethane	129	9.446	9.447	-0.001	89	30029	2.00	1.72	
100 Ethylene Dibromide	107	9.575	9.576	-0.001	98	25697	2.00	1.88	
101 1-Chlorohexane	91	9.790	9.784	0.006	78	40402	1.00	0.8378	
102 Chlorobenzene	112	9.904	9.905	-0.001	96	176467	2.00	2.00	
103 Ethylbenzene	106	9.940	9.934	0.006	97	105337	2.00	1.94	
104 1,1,1,2-Tetrachloroethane	131	9.940	9.941	-0.001	41	47130	2.00	1.87	
105 m-Xylene & p-Xylene	106	10.011	10.012	-0.001	99	127285	2.00	1.95	
107 o-Xylene	106	10.333	10.327	0.006	97	115878	2.00	1.94	
106 Styrene	104	10.333	10.334	-0.001	87	142452	2.00	1.74	
108 Bromoform	173	10.548	10.541	0.007	90	10310	2.00	1.87	
109 Isopropylbenzene	105	10.590	10.584	0.006	98	331380	2.00	1.89	
111 Cyclohexanone	55	10.733	10.734	-0.001	98	23158	80.0	74.7	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.806	-0.001	97	30979	2.00	1.90	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.842	-0.001	59	6773	2.00	1.86	
114 1,2,3-Trichloropropane	110	10.876	10.877	-0.001	87	9100	2.00	1.96	
115 N-Propylbenzene	120	10.905	10.906	-0.001	98	94686	2.00	1.96	
116 Bromobenzene	156	10.912	10.913	-0.001	98	62995	2.00	1.98	
117 1,3,5-Trimethylbenzene	105	11.012	11.013	-0.001	94	279514	2.00	1.96	
118 2-Chlorotoluene	126	11.034	11.035	-0.001	94	77678	2.00	1.99	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.112	11.106	0.006	99	72441	2.00	1.86	
120 tert-Butylbenzene	119	11.313	11.314	-0.001	92	273437	2.00	1.92	
121 1,2,4-Trimethylbenzene	105	11.341	11.342	-0.001	98	284954	2.00	1.95	
122 sec-Butylbenzene	134	11.491	11.492	-0.001	96	77940	2.00	1.96	
123 4-Isopropyltoluene	119	11.584	11.585	-0.001	97	319221	2.00	1.96	
124 1,3-Dichlorobenzene	146	11.663	11.664	-0.001	95	140356	2.00	1.96	
126 1,4-Dichlorobenzene	146	11.735	11.728	0.006	96	139251	2.00	1.94	
127 n-Butylbenzene	91	11.949	11.950	-0.001	98	338103	2.00	1.94	
128 1,2-Dichlorobenzene	146	12.092	12.093	-0.001	93	111341	2.00	1.91	
129 1,2-Dibromo-3-Chloropropan	157	12.850	12.851	-0.001	63	3291	2.00	2.03	
130 1,2,4-Trichlorobenzene	180	13.801	13.795	0.006	92	69127	2.00	1.79	
131 Hexachlorobutadiene	225	13.937	13.931	0.006	94	59432	2.00	1.87	
132 Naphthalene	128	14.173	14.167	0.006	98	86039	2.00	2.07	
133 1,2,3-Trichlorobenzene	180	14.494	14.488	0.006	92	55161	2.00	1.90	
S 140 1,2-Dichloroethene, Total	96				0		4.00	3.82	
S 138 1,2-Dichloroethene, Total	1				0		4.00	3.82	
S 139 Xylenes, Total	106				0		4.00	3.89	
S 137 1,3-Dichloropropene, Total	1				0		4.00	3.48	
S 134 Trihalomethanes, Total	1				0		8.00	7.30	
S 135 Xylenes, Total (URS)	1				0		4.00	3.89	
S 136 Total BTEX	1				0			9.72	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

MV-Gas/Ket A_00052	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 1.00	Units: uL
MV-2cleve+AVA_00017	Amount Added: 1.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.16	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2902.D

Injection Date: 20-Oct-2016 10:33:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD020

Worklist Smp#: 12

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

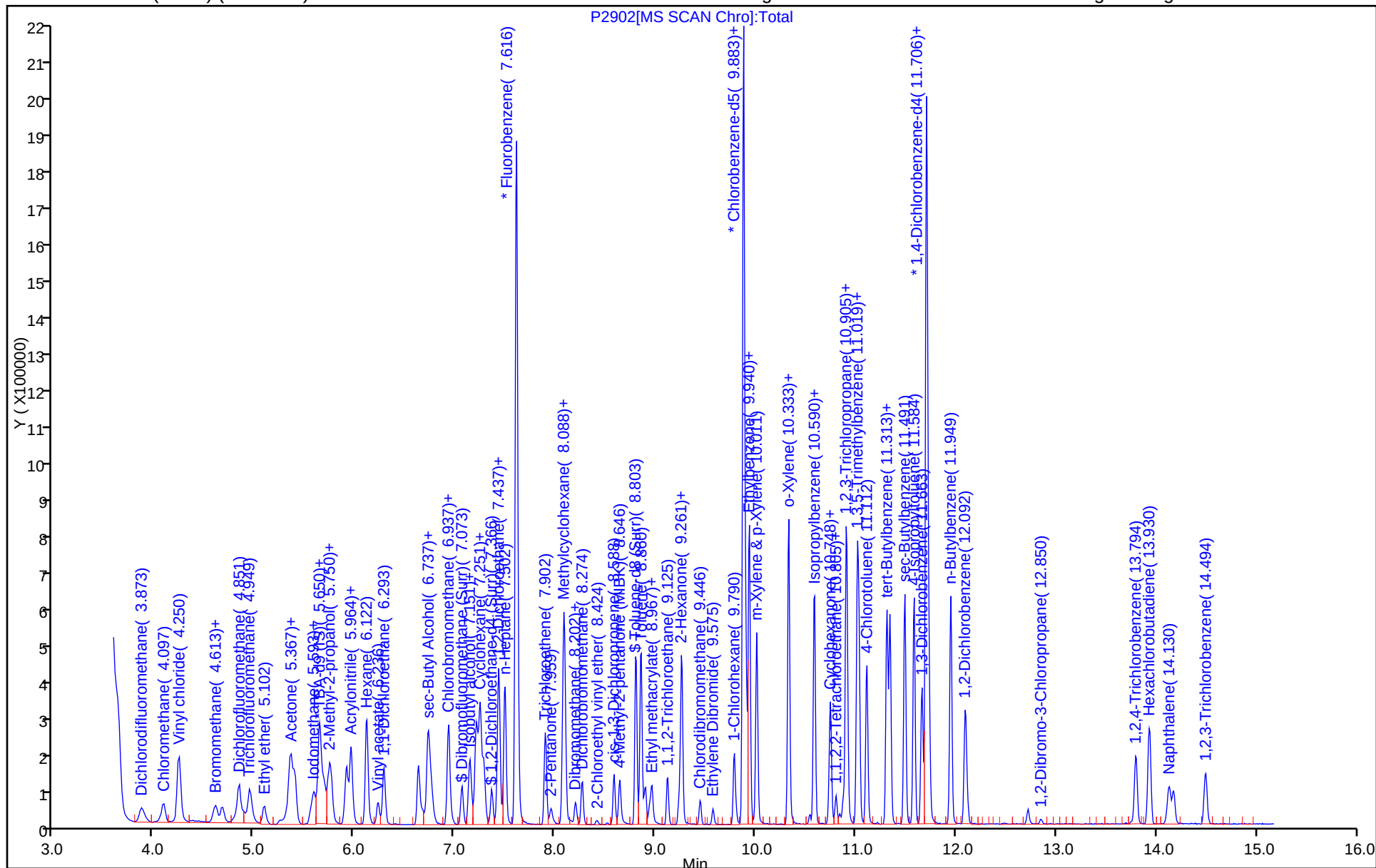
ALS Bottle#: 13

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2902.D

Injection Date: 20-Oct-2016 10:33:30

Instrument ID: VMS_P

Lims ID: STD020

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#:

13

Worklist Smp#: 12

Purge Vol: 20.000 mL

Dil. Factor:

1.0000

Method: AQ_VMSP_8260

Limit Group:

MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Detector

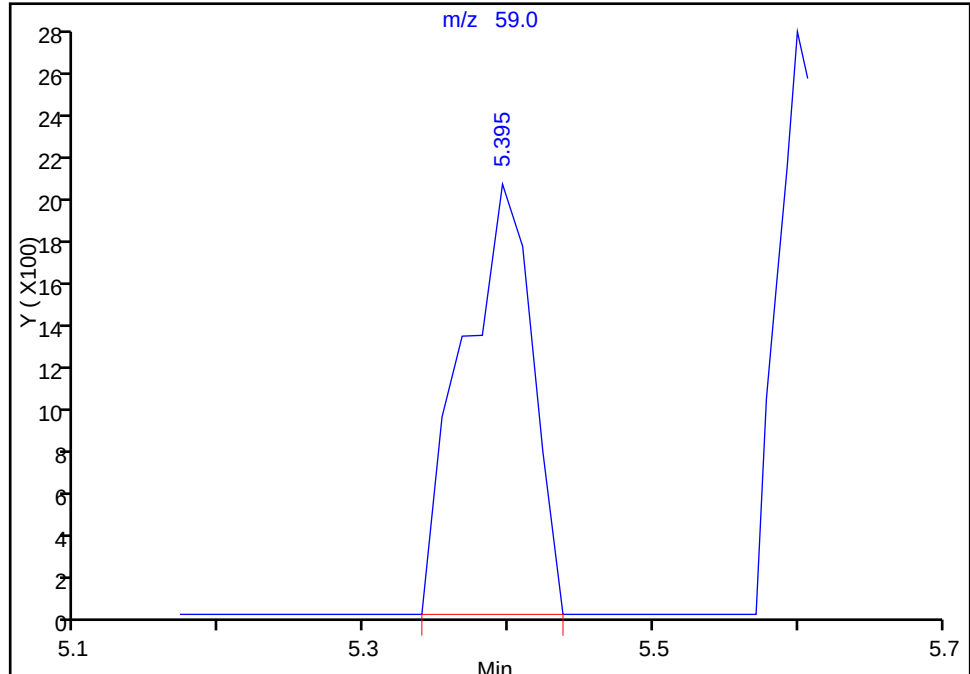
MS SCAN

35 Ethyl ether, CAS: 60-29-7

Signal: 1

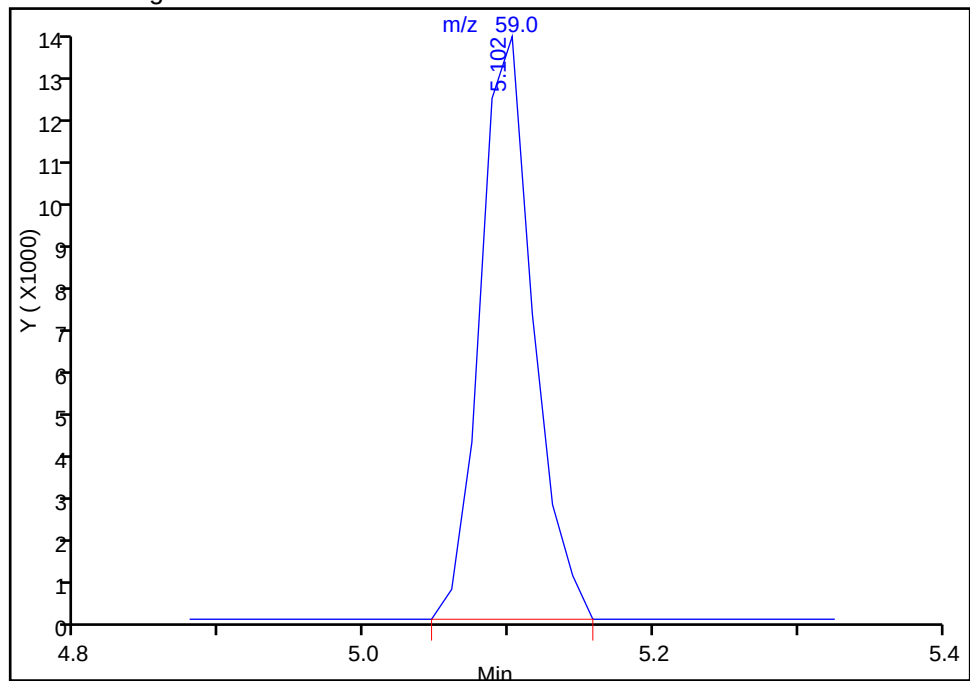
RT: 5.40
Area: 6791
Amount: 0.685080
Amount Units: ug/l

Processing Integration Results



RT: 5.10
Area: 35317
Amount: 1.901625
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 20-Oct-2016 16:47:13

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2903.D
 Lims ID: STD050
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 20-Oct-2016 10:53:30 ALS Bottle#: 14 Worklist Smp#: 13
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD050
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:43 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 11:43:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.644	0.006	50	145694	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.617	-0.001	97	1491773	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.884	-0.001	91	308691	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.707	-0.001	97	488730	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.074	-0.001	91	172453	5.00	5.26	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.367	-0.001	98	186103	5.00	5.36	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.804	-0.001	96	725763	5.00	5.39	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.749	-0.001	82	263317	5.00	5.27	
23 Dichlorodifluoromethane	85	3.874	3.873	0.001	99	329877	5.00	5.75	
26 Chloromethane	50	4.097	4.096	0.001	99	231987	5.00	5.12	
27 Vinyl chloride	62	4.251	4.250	0.001	99	225450	5.00	5.38	
29 Bromomethane	94	4.614	4.613	0.001	95	133185	5.00	5.25	
30 Chloroethane	64	4.684	4.683	0.001	96	125345	5.00	4.99	
31 Dichlorofluoromethane	67	4.851	4.850	0.001	99	400213	5.00	5.34	
32 Trichlorofluoromethane	101	4.949	4.948	0.001	99	401447	5.00	5.43	
35 Ethyl ether	59	5.103	5.102	0.001	92	97379	5.00	5.16	a
39 Acrolein	56	5.256	5.255	0.001	99	48078	50.0	49.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.354	5.353	0.001	96	174766	5.00	5.09	
41 Acetone	43	5.368	5.367	0.001	53	97993	20.0	20.8	
43 1,1-Dichloroethene	96	5.410	5.409	0.001	95	215904	5.00	5.17	
44 Iodomethane	142	5.579	5.586	-0.007	98	285329	5.00	5.03	
45 Methyl acetate	43	5.600	5.601	-0.001	98	236699	25.0	24.4	
47 3-Chloro-1-propene	41	5.650	5.651	-0.001	86	386433	5.00	5.10	
48 Carbon disulfide	76	5.700	5.694	0.006	99	750013	5.00	5.22	
49 2-Methyl-2-propanol	59	5.715	5.715	0.000	95	44643	50.0	53.2	
50 Methylene Chloride	84	5.765	5.751	0.014	98	200465	5.00	5.02	
51 Methyl tert-butyl ether	73	5.922	5.922	0.000	95	255438	5.00	5.05	
52 Acrylonitrile	53	5.922	5.922	0.000	81	203186	50.0	52.8	
53 trans-1,2-Dichloroethene	96	5.965	5.965	0.000	93	205778	5.00	5.16	
54 Hexane	57	6.122	6.123	-0.001	94	362052	5.00	5.24	
55 Vinyl acetate	43	6.237	6.230	0.007	97	299771	10.0	9.22	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.294	6.294	0.000	98	394299	5.00	5.16	
61 2-Butanone (MEK)	43	6.687	6.688	-0.001	98	130835	20.0	20.8	
62 sec-Butyl Alcohol	45	6.730	6.730	0.000	37	44134	75.0	69.5	
63 cis-1,2-Dichloroethene	96	6.730	6.730	0.000	89	193939	5.00	5.19	
64 2,2-Dichloropropane	77	6.758	6.752	0.006	83	261621	5.00	5.00	
67 Chlorobromomethane	128	6.930	6.931	-0.001	90	62730	5.00	5.27	
68 Chloroform	83	6.937	6.938	-0.001	97	351600	5.00	5.18	
69 Tetrahydrofuran	42	6.966	6.959	0.007	88	33616	10.0	9.51	
70 Isobutyl alcohol	41	7.145	7.145	0.000	37	35197	125.0	119.8	
71 1,1,1-Trichloroethane	97	7.152	7.152	0.000	96	303220	5.00	5.12	
72 Cyclohexane	56	7.216	7.217	-0.001	96	428524	5.00	5.31	
73 1,1-Dichloropropene	75	7.252	7.252	0.000	93	318183	5.00	5.25	
74 Carbon tetrachloride	117	7.288	7.288	0.000	97	288085	5.00	5.12	
76 1,2-Dichloroethane	62	7.431	7.424	0.007	95	201911	5.00	5.10	
77 Benzene	78	7.438	7.438	0.000	99	788147	5.00	5.26	
14 n-Heptane	43	7.502	7.495	0.007	95	429016	5.00	5.36	
79 Trichloroethene	95	7.902	7.903	-0.001	93	208822	5.00	5.05	
80 2-Pentanone	43	7.960	7.960	0.000	97	179714	NC	NC	
82 Methylcyclohexane	55	8.088	8.082	0.006	95	360427	5.00	5.20	
83 1,2-Dichloropropane	63	8.096	8.096	0.000	83	172670	5.00	5.11	
84 1,4-Dioxane	88	8.153	8.153	0.000	90	9167	100.0	94.0	
85 Dibromomethane	93	8.203	8.203	0.000	89	64292	5.00	5.21	
86 Dichlorobromomethane	83	8.267	8.268	-0.001	98	198107	5.00	5.21	
87 2-Chloroethyl vinyl ether	63	8.417	8.411	0.006	91	15688	5.00	4.22	
89 cis-1,3-Dichloropropene	75	8.589	8.589	0.000	88	191170	5.00	4.52	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.640	0.006	99	254201	20.0	19.7	
91 Toluene	91	8.861	8.854	0.007	96	826443	5.00	5.33	
92 Ethyl methacrylate	69	8.939	8.940	-0.001	95	75284	5.00	4.53	
93 trans-1,3-Dichloropropene	75	8.968	8.961	0.007	99	140562	5.00	4.68	
94 1,1,2-Trichloroethane	97	9.125	9.119	0.006	96	84817	5.00	5.15	
95 2-Hexanone	43	9.232	9.233	-0.001	98	163818	20.0	19.6	
96 1,3-Dichloropropane	76	9.254	9.254	0.000	97	162081	5.00	5.27	
97 Tetrachloroethene	164	9.268	9.269	-0.001	91	164356	5.00	5.15	
98 Chlorodibromomethane	129	9.447	9.447	0.000	90	88258	5.00	4.42	
100 Ethylene Dibromide	107	9.576	9.576	0.000	98	73426	5.00	5.17	
101 1-Chlorohexane	91	9.790	9.784	0.006	88	129067	2.50	2.58	
102 Chlorobenzene	112	9.905	9.905	0.000	95	465169	5.00	5.08	
103 Ethylbenzene	106	9.940	9.934	0.006	98	292033	5.00	5.19	
104 1,1,1,2-Tetrachloroethane	131	9.940	9.941	-0.001	92	135636	5.00	5.17	
105 m-Xylene & p-Xylene	106	10.012	10.012	0.000	99	359578	5.00	5.30	
107 o-Xylene	106	10.334	10.327	0.007	89	341307	5.00	5.50	
106 Styrene	104	10.334	10.334	0.000	82	446978	5.00	5.26	
108 Bromoform	173	10.541	10.541	0.000	91	33773	5.00	4.47	
109 Isopropylbenzene	105	10.591	10.584	0.007	97	972824	5.00	5.27	
111 Cyclohexanone	55	10.734	10.734	0.000	95	68222	200.0	181.9	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.806	-0.001	97	88141	5.00	5.13	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.842	-0.001	74	22819	5.00	4.51	
114 1,2,3-Trichloropropane	110	10.877	10.877	0.000	88	24948	5.00	5.10	
115 N-Propylbenzene	120	10.906	10.906	0.000	98	277541	5.00	5.46	
116 Bromobenzene	156	10.913	10.913	0.000	98	178105	5.00	5.31	
117 1,3,5-Trimethylbenzene	105	11.013	11.013	0.000	93	812245	5.00	5.42	
118 2-Chlorotoluene	126	11.034	11.035	-0.001	95	217293	5.00	5.30	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.113	11.106	0.007	99	218461	5.00	5.33	
120 tert-Butylbenzene	119	11.313	11.314	-0.001	92	806949	5.00	5.40	
121 1,2,4-Trimethylbenzene	105	11.342	11.342	0.000	99	834647	5.00	5.44	
122 sec-Butylbenzene	134	11.492	11.492	0.000	96	221515	5.00	5.28	
123 4-Isopropyltoluene	119	11.585	11.585	0.000	97	934269	5.00	5.45	
124 1,3-Dichlorobenzene	146	11.663	11.664	-0.001	95	390017	5.00	5.18	
126 1,4-Dichlorobenzene	146	11.735	11.728	0.007	93	386795	5.00	5.13	
127 n-Butylbenzene	91	11.949	11.950	-0.001	99	984634	5.00	5.36	
128 1,2-Dichlorobenzene	146	12.092	12.093	-0.001	94	316457	5.00	5.16	
129 1,2-Dibromo-3-Chloropropan	157	12.850	12.851	-0.001	69	9385	5.00	4.29	
130 1,2,4-Trichlorobenzene	180	13.794	13.795	-0.001	93	204962	5.00	5.05	
131 Hexachlorobutadiene	225	13.930	13.931	-0.001	94	168274	5.00	5.03	
132 Naphthalene	128	14.173	14.167	0.006	98	227681	5.00	4.37	
133 1,2,3-Trichlorobenzene	180	14.495	14.488	0.007	94	154842	5.00	5.07	
S 140 1,2-Dichloroethene, Total	96				0		10.0	10.3	
S 138 1,2-Dichloroethene, Total	1				0		10.0	10.3	
S 139 Xylenes, Total	106				0		10.0	10.8	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.20	
S 134 Trihalomethanes, Total	1				0		20.0	19.3	
S 135 Xylenes, Total (URS)	1				0		10.0	10.8	
S 136 Total BTEX	1				0			26.6	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

MV-Gas/Ket A_00052	Amount Added: 2.50	Units: uL
MV-Main A_00027	Amount Added: 2.50	Units: uL
MV-2cleve+AVA_00017	Amount Added: 2.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.40	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2903.D

Injection Date: 20-Oct-2016 10:53:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD050

Worklist Smp#: 13

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

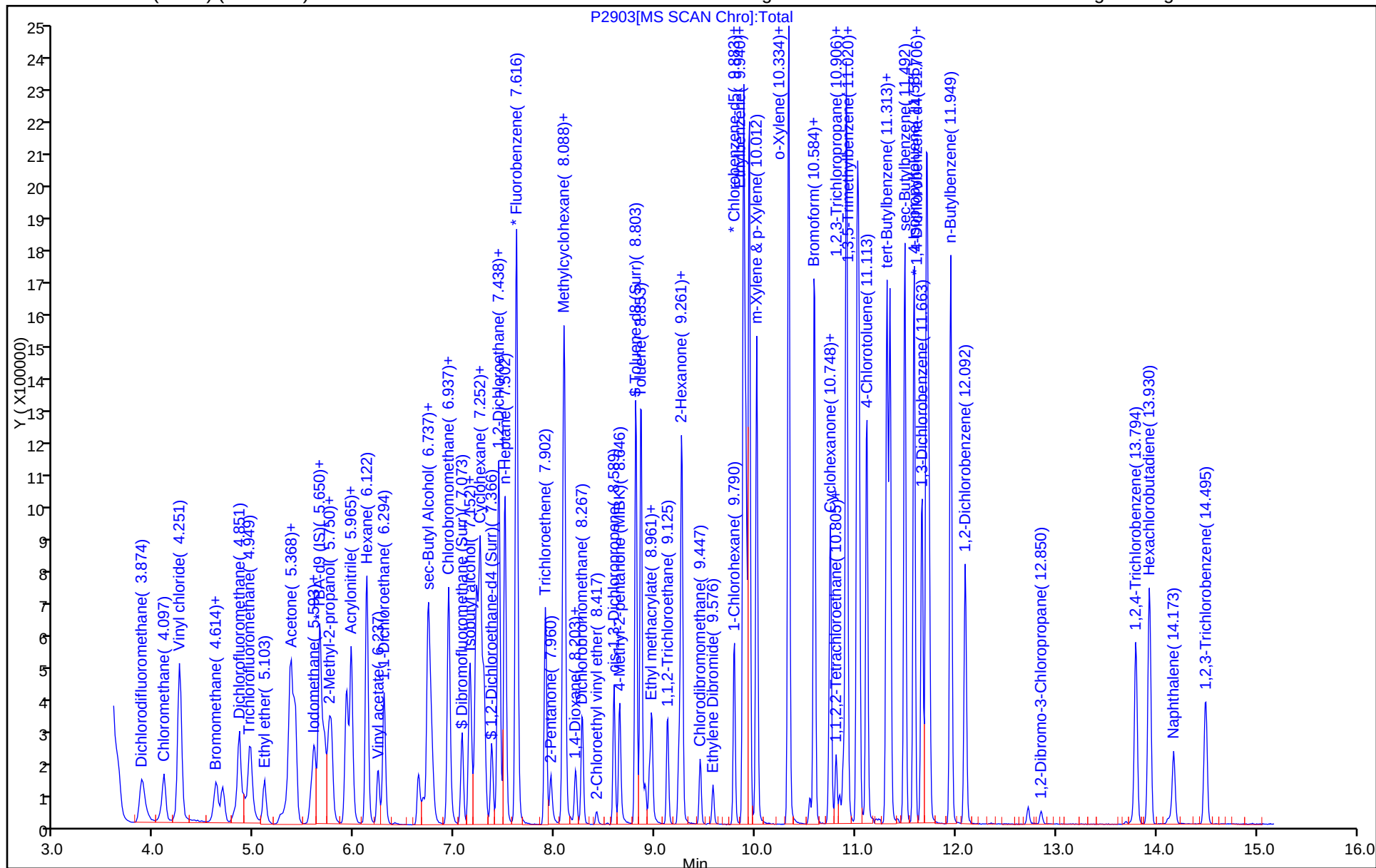
ALS Bottle#: 14

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

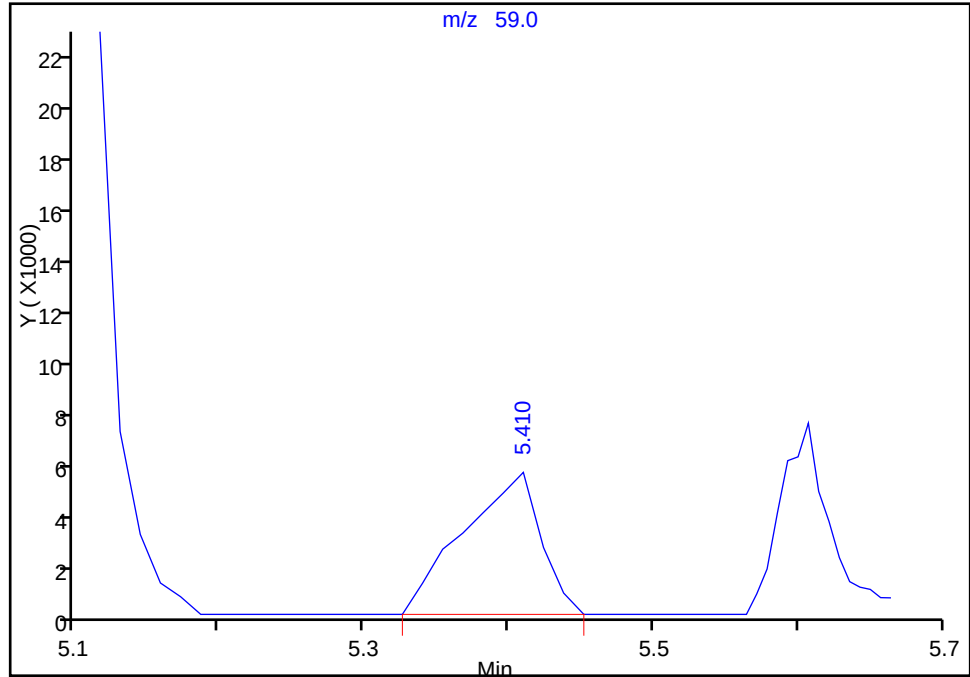
Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2903.D
Injection Date: 20-Oct-2016 10:53:30 Instrument ID: VMS_P
Lims ID: STD050
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector: MS SCAN

35 Ethyl ether, CAS: 60-29-7

Signal: 1

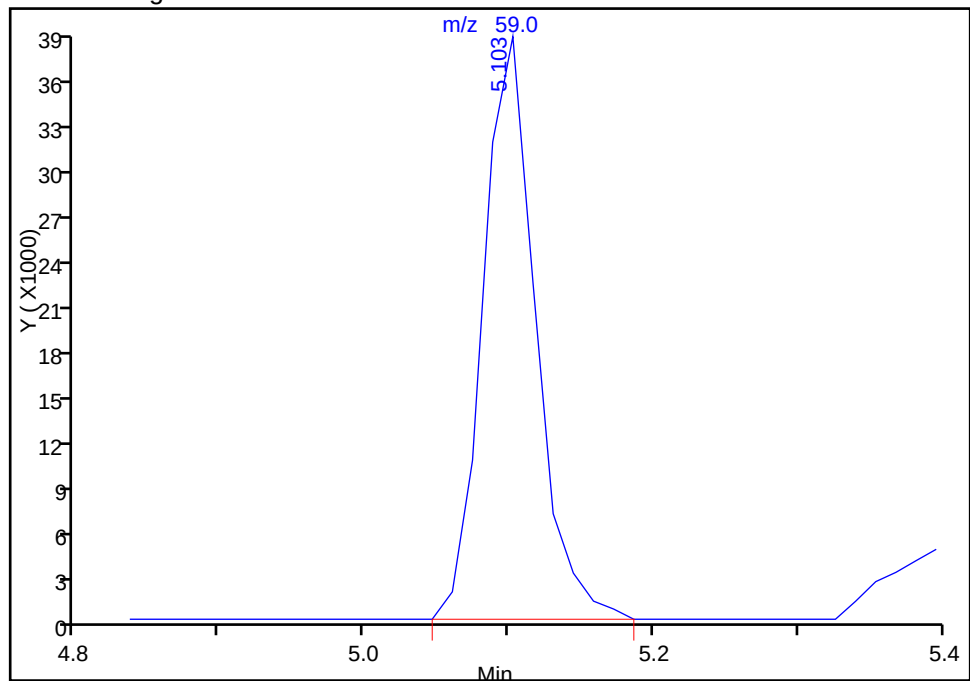
RT: 5.41
Area: 20104
Amount: 2.882648
Amount Units: ug/l

Processing Integration Results



RT: 5.10
Area: 97379
Amount: 5.163909
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 20-Oct-2016 16:47:00

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2904.D
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 5
 Inject. Date: 20-Oct-2016 11:12:30 ALS Bottle#: 15 Worklist Smp#: 14
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICIS
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:49 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 11:48:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.644	5.644	0.000	39	163951	250.0	250.0	
* 1 Fluorobenzene	96	7.617	7.617	0.000	97	1553291	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	90	317797	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.707	11.707	0.000	96	504583	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.074	7.074	0.000	91	323116	10.0	9.47	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.367	7.367	0.000	99	336595	10.0	9.30	
\$ 7 Toluene-d8 (Surr)	98	8.804	8.804	0.000	96	1353308	10.0	9.76	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	87	479660	10.0	9.30	
23 Dichlorodifluoromethane	85	3.873	3.873	0.000	100	622699	10.0	10.4	
26 Chloromethane	50	4.096	4.096	0.000	98	426874	10.0	9.05	
27 Vinyl chloride	62	4.250	4.250	0.000	100	422121	10.0	9.67	
29 Bromomethane	94	4.613	4.613	0.000	96	249536	10.0	9.45	
30 Chloroethane	64	4.683	4.683	0.000	97	240257	10.0	9.19	
31 Dichlorofluoromethane	67	4.850	4.850	0.000	99	753168	10.0	9.64	
32 Trichlorofluoromethane	101	4.948	4.948	0.000	99	780450	10.0	10.1	
35 Ethyl ether	59	5.102	5.102	0.000	94	201445	10.0	10.3	a
39 Acrolein	56	5.255	5.255	0.000	99	105228	100.0	103.3	
40 1,1,2-Trichloro-1,2,2-trif	151	5.353	5.353	0.000	96	354187	10.0	9.92	
41 Acetone	43	5.367	5.367	0.000	97	167834	40.0	34.3	
43 1,1-Dichloroethene	96	5.409	5.409	0.000	95	436389	10.0	10.0	
44 Iodomethane	142	5.586	5.586	0.000	97	581087	10.0	9.83	
45 Methyl acetate	43	5.601	5.601	0.000	99	496907	50.0	49.2	
47 3-Chloro-1-propene	41	5.651	5.651	0.000	87	810737	10.0	10.3	
48 Carbon disulfide	76	5.694	5.694	0.000	99	1537413	10.0	10.3	
49 2-Methyl-2-propanol	59	5.715	5.715	0.000	94	91474	100.0	96.9	
50 Methylene Chloride	84	5.751	5.751	0.000	98	375274	10.0	9.76	
51 Methyl tert-butyl ether	73	5.922	5.922	0.000	96	542131	10.0	10.3	
52 Acrylonitrile	53	5.922	5.922	0.000	81	427424	100.0	106.6	
53 trans-1,2-Dichloroethene	96	5.965	5.965	0.000	93	413411	10.0	9.95	
54 Hexane	57	6.123	6.123	0.000	94	732856	10.0	10.3	
55 Vinyl acetate	43	6.230	6.230	0.000	97	683689	20.0	19.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.294	6.294	0.000	98	793419	10.0	9.98	
61 2-Butanone (MEK)	43	6.688	6.688	0.000	99	265284	40.0	38.9	
62 sec-Butyl Alcohol	45	6.730	6.730	0.000	37	105977	150.0	148.3	
63 cis-1,2-Dichloroethene	96	6.730	6.730	0.000	89	394339	10.0	10.1	
64 2,2-Dichloropropane	77	6.752	6.752	0.000	84	538946	10.0	9.90	
67 Chlorobromomethane	128	6.931	6.931	0.000	93	126502	10.0	10.2	
68 Chloroform	83	6.938	6.938	0.000	98	714167	10.0	10.1	
69 Tetrahydrofuran	42	6.959	6.959	0.000	88	74496	20.0	19.5	
70 Isobutyl alcohol	41	7.145	7.145	0.000	39	79087	250.0	239.1	
71 1,1,1-Trichloroethane	97	7.152	7.152	0.000	96	631534	10.0	10.2	
72 Cyclohexane	56	7.217	7.217	0.000	96	874764	10.0	10.4	
73 1,1-Dichloropropene	75	7.252	7.252	0.000	92	647705	10.0	10.3	
74 Carbon tetrachloride	117	7.288	7.288	0.000	96	602295	10.0	10.3	
76 1,2-Dichloroethane	62	7.424	7.424	0.000	98	415304	10.0	10.1	
77 Benzene	78	7.438	7.438	0.000	99	1576485	10.0	10.1	
14 n-Heptane	43	7.495	7.495	0.000	95	872310	10.0	10.5	
79 Trichloroethene	95	7.903	7.903	0.000	94	428287	10.0	9.95	
80 2-Pentanone	43	7.960	7.960	0.000	97	171900	NC	NC	
82 Methylcyclohexane	55	8.082	8.082	0.000	95	739118	10.0	10.2	
83 1,2-Dichloropropane	63	8.096	8.096	0.000	87	350928	10.0	9.98	
84 1,4-Dioxane	88	8.153	8.153	0.000	94	22961	200.0	206.3	
85 Dibromomethane	93	8.203	8.203	0.000	90	131874	10.0	10.3	
86 Dichlorobromomethane	83	8.268	8.268	0.000	98	417686	10.0	10.5	
87 2-Chloroethyl vinyl ether	63	8.411	8.411	0.000	92	43337	10.0	8.35	
89 cis-1,3-Dichloropropene	75	8.589	8.589	0.000	88	420648	10.0	9.39	
90 4-Methyl-2-pentanone (MIBK)	43	8.640	8.640	0.000	100	539538	40.0	38.8	
91 Toluene	91	8.854	8.854	0.000	96	1654810	10.0	10.3	
92 Ethyl methacrylate	69	8.940	8.940	0.000	91	173115	10.0	9.45	
93 trans-1,3-Dichloropropene	75	8.961	8.961	0.000	97	310767	10.0	9.30	
94 1,1,2-Trichloroethane	97	9.119	9.119	0.000	96	171854	10.0	10.0	
95 2-Hexanone	43	9.233	9.233	0.000	96	344423	40.0	38.4	
96 1,3-Dichloropropane	76	9.254	9.254	0.000	96	327822	10.0	10.4	
97 Tetrachloroethene	164	9.269	9.269	0.000	93	330435	10.0	10.1	
98 Chlorodibromomethane	129	9.447	9.447	0.000	90	195292	10.0	9.21	
100 Ethylene Dibromide	107	9.576	9.576	0.000	97	156551	10.0	10.7	
101 1-Chlorohexane	91	9.784	9.784	0.000	90	276505	5.00	5.37	
102 Chlorobenzene	112	9.905	9.905	0.000	92	940728	10.0	9.98	
103 Ethylbenzene	106	9.934	9.934	0.000	98	598539	10.0	10.3	
104 1,1,1,2-Tetrachloroethane	131	9.941	9.941	0.000	94	287544	10.0	10.7	
105 m-Xylene & p-Xylene	106	10.012	10.012	0.000	99	726763	10.0	10.4	
107 o-Xylene	106	10.327	10.327	0.000	89	681056	10.0	10.7	
106 Styrene	104	10.334	10.334	0.000	83	943083	10.0	10.8	
108 Bromoform	173	10.541	10.541	0.000	93	75996	10.0	8.96	
109 Isopropylbenzene	105	10.584	10.584	0.000	98	1990521	10.0	10.4	
111 Cyclohexanone	55	10.734	10.734	0.000	96	156005	400.0	384.0	
112 1,1,2,2-Tetrachloroethane	83	10.806	10.806	0.000	97	179605	10.0	10.1	
113 trans-1,4-Dichloro-2-buten	53	10.842	10.842	0.000	75	49653	10.0	8.78	
114 1,2,3-Trichloropropane	110	10.877	10.877	0.000	90	52530	10.0	10.4	
115 N-Propylbenzene	120	10.906	10.906	0.000	98	554844	10.0	10.6	
116 Bromobenzene	156	10.913	10.913	0.000	97	356192	10.0	10.3	
117 1,3,5-Trimethylbenzene	105	11.013	11.013	0.000	94	1651728	10.0	10.7	
118 2-Chlorotoluene	126	11.035	11.035	0.000	95	425818	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.106	11.106	0.000	100	434179	10.0	10.3	
120 tert-Butylbenzene	119	11.314	11.314	0.000	92	1657183	10.0	10.7	
121 1,2,4-Trimethylbenzene	105	11.342	11.342	0.000	100	1680611	10.0	10.6	
122 sec-Butylbenzene	134	11.492	11.492	0.000	96	452846	10.0	10.5	
123 4-Isopropyltoluene	119	11.585	11.585	0.000	96	1892331	10.0	10.7	
124 1,3-Dichlorobenzene	146	11.664	11.664	0.000	95	788759	10.0	10.1	
126 1,4-Dichlorobenzene	146	11.728	11.728	0.000	93	765468	10.0	9.83	
127 n-Butylbenzene	91	11.950	11.950	0.000	99	2023580	10.0	10.7	
128 1,2-Dichlorobenzene	146	12.093	12.093	0.000	94	643204	10.0	10.2	
129 1,2-Dibromo-3-Chloropropan	157	12.851	12.851	0.000	69	21383	10.0	8.62	
130 1,2,4-Trichlorobenzene	180	13.795	13.795	0.000	93	429673	10.0	10.3	
131 Hexachlorobutadiene	225	13.931	13.931	0.000	94	346487	10.0	10.0	
132 Naphthalene	128	14.167	14.167	0.000	98	517402	10.0	8.96	
133 1,2,3-Trichlorobenzene	180	14.488	14.488	0.000	94	327940	10.0	10.4	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	20.1	
S 139 Xylenes, Total	106				0		20.0	21.1	
S 137 1,3-Dichloropropene, Total	1				0		20.0	18.7	
S 134 Trihalomethanes, Total	1				0		40.0	38.8	
S 135 Xylenes, Total (URS)	1				0		20.0	21.1	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL
MV-Main A_00027	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00017	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2904.D

Injection Date: 20-Oct-2016 11:12:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: ICIS

Worklist Smp#: 14

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

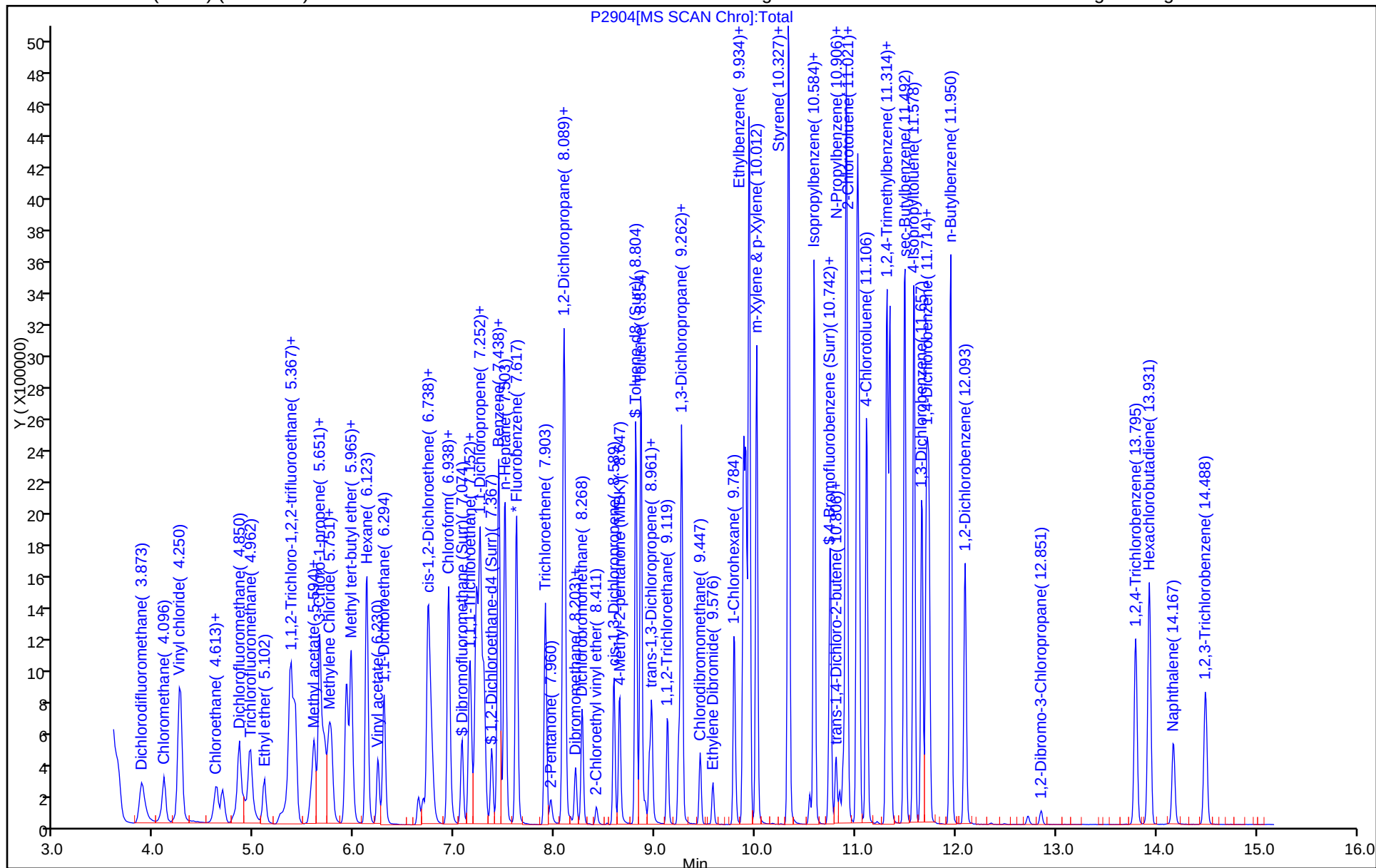
ALS Bottle#: 15

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2904.D

Injection Date: 20-Oct-2016 11:12:30

Instrument ID: VMS_P

Lims ID: ICIS

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#:

15

Worklist Smp#: 14

Purge Vol: 20.000 mL

Dil. Factor:

1.0000

Method: AQ_VMSP_8260

Limit Group:

MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Detector

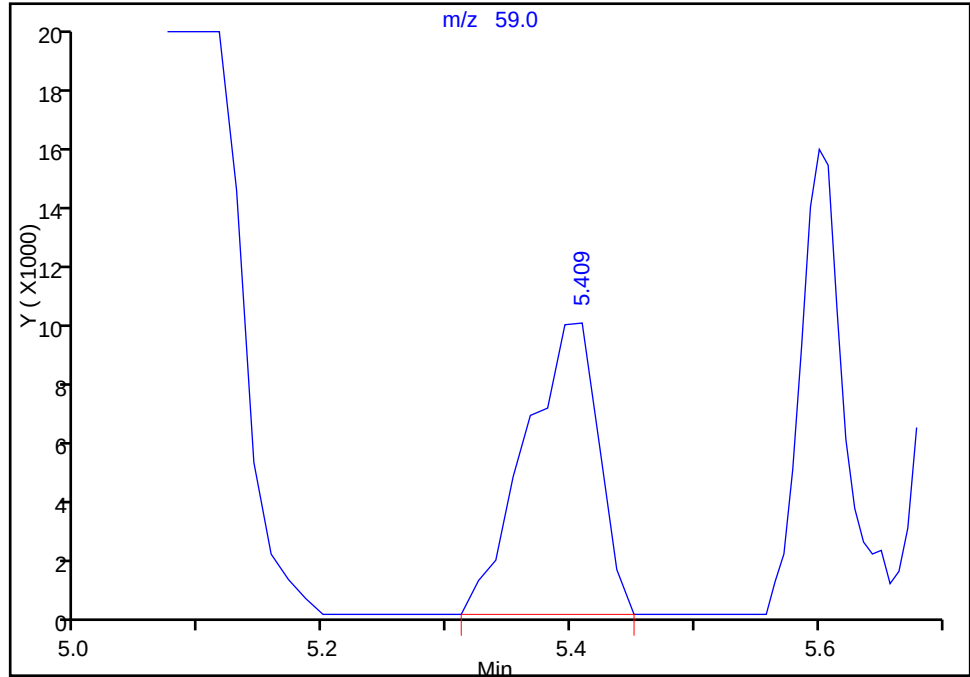
MS SCAN

35 Ethyl ether, CAS: 60-29-7

Signal: 1

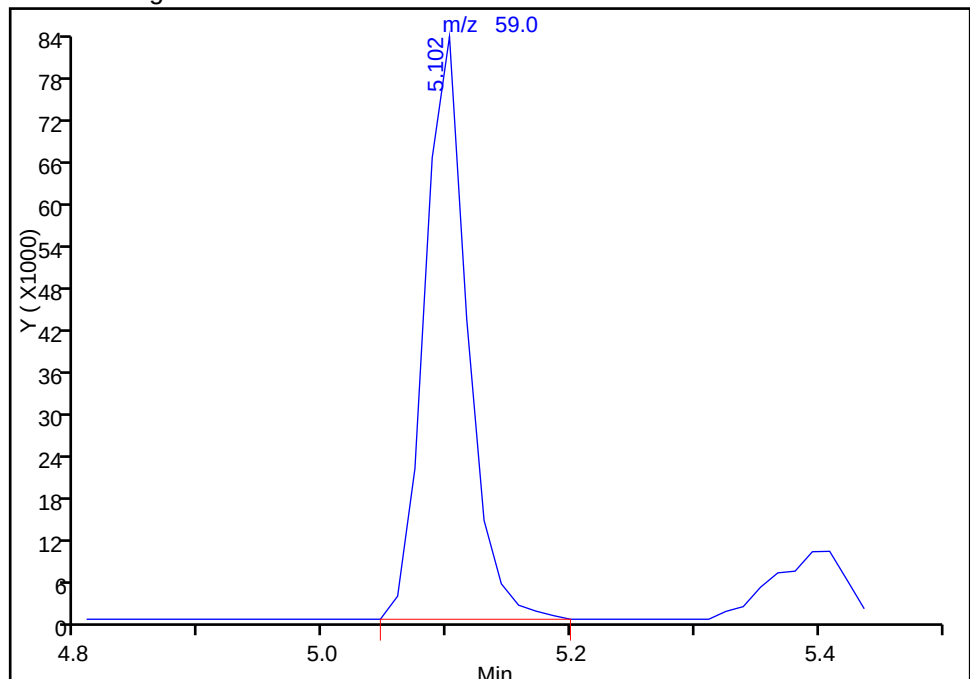
RT: 5.41
Area: 39902
Amount: 9.899067
Amount Units: ug/l

Processing Integration Results



RT: 5.10
Area: 201445
Amount: 10.259347
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 20-Oct-2016 16:46:41

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2905.D
 Lims ID: STD30
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 20-Oct-2016 11:32:30 ALS Bottle#: 16 Worklist Smp#: 15
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD30
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:53 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 11:55:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.644	5.644	0.000	30	158922	250.0	250.0	
* 1 Fluorobenzene	96	7.617	7.617	0.000	97	1468651	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	89	310356	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.707	11.707	0.000	97	478244	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.074	7.074	0.000	91	1007071	30.0	31.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.367	7.367	0.000	100	1036188	30.0	30.3	
\$ 7 Toluene-d8 (Surr)	98	8.804	8.804	0.000	96	4174064	30.0	30.8	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	86	1511596	30.0	30.9	
23 Dichlorodifluoromethane	85	3.875	3.873	0.002	99	1952405	30.0	34.6	
26 Chloromethane	50	4.099	4.096	0.003	98	1337703	30.0	30.0	
27 Vinyl chloride	62	4.252	4.250	0.002	99	1315819	30.0	31.9	
29 Bromomethane	94	4.615	4.613	0.002	94	792134	30.0	31.7	
30 Chloroethane	64	4.685	4.683	0.002	97	748365	30.0	30.3	
31 Dichlorofluoromethane	67	4.853	4.850	0.003	99	2324875	30.0	31.5	
32 Trichlorofluoromethane	101	4.951	4.948	0.003	99	2371668	30.0	32.6	
35 Ethyl ether	59	5.090	5.102	-0.012	93	628239	30.0	33.8	a
39 Acrolein	56	5.258	5.255	0.003	99	354161	300.0	367.9	
40 1,1,2-Trichloro-1,2,2-trif	151	5.356	5.353	0.003	96	1112346	30.0	32.9	
41 Acetone	43	5.370	5.367	0.003	97	567201	120.0	122.6	
43 1,1-Dichloroethene	96	5.411	5.409	0.002	94	1373644	30.0	33.4	
44 Iodomethane	142	5.587	5.586	0.001	97	1839620	30.0	32.9	
45 Methyl acetate	43	5.601	5.601	0.000	99	1565008	150.0	164.0	
47 3-Chloro-1-propene	41	5.651	5.651	0.000	87	2609638	30.0	35.0	
48 Carbon disulfide	76	5.694	5.694	0.000	100	4901916	30.0	34.7	
49 2-Methyl-2-propanol	59	5.715	5.715	0.000	94	323930	300.0	353.9	
50 Methylene Chloride	84	5.758	5.751	0.007	98	1115186	30.0	32.7	
51 Methyl tert-butyl ether	73	5.916	5.922	-0.006	96	1746880	30.0	35.1	
52 Acrylonitrile	53	5.916	5.922	-0.006	84	1363311	300.0	359.5	
53 trans-1,2-Dichloroethene	96	5.966	5.965	0.001	93	1285510	30.0	32.7	
54 Hexane	57	6.116	6.123	-0.007	94	2288422	30.0	32.9	
55 Vinyl acetate	43	6.230	6.230	0.000	97	2277921	60.0	66.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.295	6.294	0.001	98	2448312	30.0	32.6	
61 2-Butanone (MEK)	43	6.681	6.688	-0.007	98	854038	120.0	128.8	
62 sec-Butyl Alcohol	45	6.724	6.730	-0.006	39	364867	450.0	526.8	
63 cis-1,2-Dichloroethene	96	6.731	6.730	0.001	89	1228313	30.0	33.4	
64 2,2-Dichloropropane	77	6.752	6.752	0.000	86	1799215	30.0	35.0	
67 Chlorobromomethane	128	6.931	6.931	0.000	92	392835	30.0	33.5	
68 Chloroform	83	6.938	6.938	0.000	98	2219697	30.0	33.2	
69 Tetrahydrofuran	42	6.960	6.959	0.001	89	240320	60.0	65.0	
70 Isobutyl alcohol	41	7.146	7.145	0.001	43	284397	750.0	887.1	
71 1,1,1-Trichloroethane	97	7.153	7.152	0.001	97	2095744	30.0	36.0	
72 Cyclohexane	56	7.217	7.217	0.000	95	2768823	30.0	34.9	
73 1,1-Dichloropropene	75	7.253	7.252	0.001	91	1999530	30.0	33.5	
74 Carbon tetrachloride	117	7.289	7.288	0.000	97	2007018	30.0	36.2	
76 1,2-Dichloroethane	62	7.424	7.424	0.000	98	1319327	30.0	33.8	
77 Benzene	78	7.439	7.438	0.001	99	4827572	30.0	32.7	
14 n-Heptane	43	7.496	7.495	0.001	95	2775009	30.0	35.2	
79 Trichloroethene	95	7.903	7.903	0.000	93	1354468	30.0	33.3	
80 2-Pentanone	43	7.953	7.960	-0.007	97	1113664	NC	NC	
82 Methylcyclohexane	55	8.082	8.082	0.000	95	2337255	30.0	34.3	
83 1,2-Dichloropropane	63	8.096	8.096	0.000	86	1081254	30.0	32.5	
84 1,4-Dioxane	88	8.154	8.153	0.001	95	71379	600.0	645.9	
85 Dibromomethane	93	8.204	8.203	0.001	90	416921	30.0	34.3	
86 Dichlorobromomethane	83	8.268	8.268	0.000	98	1359784	30.0	36.3	
87 2-Chloroethyl vinyl ether	63	8.411	8.411	0.000	92	174776	30.0	30.0	
89 cis-1,3-Dichloropropene	75	8.583	8.589	-0.006	88	1434208	30.0	32.2	
90 4-Methyl-2-pentanone (MIBK)	43	8.640	8.640	0.000	99	1781569	120.0	132.1	
91 Toluene	91	8.854	8.854	0.000	97	5111912	30.0	33.5	
92 Ethyl methacrylate	69	8.940	8.940	0.000	93	627987	30.0	33.6	
93 trans-1,3-Dichloropropene	75	8.962	8.961	0.001	98	1083296	30.0	32.8	
94 1,1,2-Trichloroethane	97	9.119	9.119	0.000	95	547783	30.0	33.8	
95 2-Hexanone	43	9.233	9.233	0.000	99	1191255	120.0	132.1	
96 1,3-Dichloropropane	76	9.255	9.254	0.001	96	1025882	30.0	33.2	
97 Tetrachloroethene	164	9.262	9.269	-0.007	95	1028675	30.0	32.1	
98 Chlorodibromomethane	129	9.448	9.447	0.001	90	678878	30.0	32.1	
100 Ethylene Dibromide	107	9.577	9.576	0.001	98	510658	30.0	35.8	
101 1-Chlorohexane	91	9.784	9.784	0.000	87	932598	15.0	18.5	
102 Chlorobenzene	112	9.905	9.905	0.000	90	2924205	30.0	31.8	
103 Ethylbenzene	106	9.934	9.934	0.000	98	1841594	30.0	32.5	
104 1,1,1,2-Tetrachloroethane	131	9.941	9.941	0.000	92	944749	30.0	35.8	
105 m-Xylene & p-Xylene	106	10.013	10.012	0.001	99	2275419	30.0	33.4	
107 o-Xylene	106	10.327	10.327	0.000	87	2098726	30.0	33.6	
106 Styrene	104	10.334	10.334	0.000	83	3017633	30.0	35.4	
108 Bromoform	173	10.542	10.541	0.001	93	276924	30.0	31.6	
109 Isopropylbenzene	105	10.585	10.584	0.001	98	6163253	30.0	34.1	
111 Cyclohexanone	55	10.735	10.734	0.001	97	555670	1200.0	1357.1	
112 1,1,2,2-Tetrachloroethane	83	10.806	10.806	0.000	96	583124	30.0	34.7	
113 trans-1,4-Dichloro-2-buten	53	10.835	10.842	-0.007	82	180730	30.0	31.8	
114 1,2,3-Trichloropropane	110	10.878	10.877	0.001	90	165059	30.0	34.5	
115 N-Propylbenzene	120	10.906	10.906	0.000	98	1694532	30.0	34.1	
116 Bromobenzene	156	10.914	10.913	0.001	99	1076757	30.0	32.8	
117 1,3,5-Trimethylbenzene	105	11.014	11.013	0.001	94	5129544	30.0	35.0	
118 2-Chlorotoluene	126	11.035	11.035	0.000	94	1307492	30.0	32.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.107	11.106	0.001	100	1362285	30.0	33.9	
120 tert-Butylbenzene	119	11.314	11.314	0.000	92	5192939	30.0	35.5	
121 1,2,4-Trimethylbenzene	105	11.343	11.342	0.001	95	5203293	30.0	34.7	
122 sec-Butylbenzene	134	11.493	11.492	0.001	97	1419029	30.0	34.6	
123 4-Isopropyltoluene	119	11.586	11.585	0.001	96	5889996	30.0	35.1	
124 1,3-Dichlorobenzene	146	11.664	11.664	0.000	95	2463931	30.0	33.4	
126 1,4-Dichlorobenzene	146	11.729	11.728	0.001	90	2400706	30.0	32.5	
127 n-Butylbenzene	91	11.950	11.950	0.000	99	6330118	30.0	35.2	
128 1,2-Dichlorobenzene	146	12.093	12.093	0.000	94	2029849	30.0	33.8	
129 1,2-Dibromo-3-Chloropropan	157	12.851	12.851	0.000	72	80077	30.0	32.0	
130 1,2,4-Trichlorobenzene	180	13.795	13.795	0.000	93	1446297	30.0	36.4	
131 Hexachlorobutadiene	225	13.931	13.931	0.000	95	1137657	30.0	34.7	
132 Naphthalene	128	14.167	14.167	0.000	98	1887777	30.0	32.9	
133 1,2,3-Trichlorobenzene	180	14.489	14.488	0.001	93	1092933	30.0	36.6	
S 140 1,2-Dichloroethene, Total	96				0		60.0	66.1	
S 138 1,2-Dichloroethene, Total	1				0		60.0	66.1	
S 139 Xylenes, Total	106				0		60.0	67.0	
S 137 1,3-Dichloropropene, Total	1				0		60.0	64.9	
S 134 Trihalomethanes, Total	1				0		120.0	133.3	
S 135 Xylenes, Total (URS)	1				0		60.0	67.0	
S 136 Total BTEX	1				0			165.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

MV-Gas/Ket A_00052

Amount Added: 15.00

Units: uL

MV-Main A_00027

Amount Added: 15.00

Units: uL

MV-2cleve+AVA_00017

Amount Added: 15.00

Units: uL

MV-ARCH SS A_00074

Amount Added: 2.40

Units: uL

MV-567649-D_00001

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2905.D

Injection Date: 20-Oct-2016 11:32:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD30

Worklist Smp#: 15

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

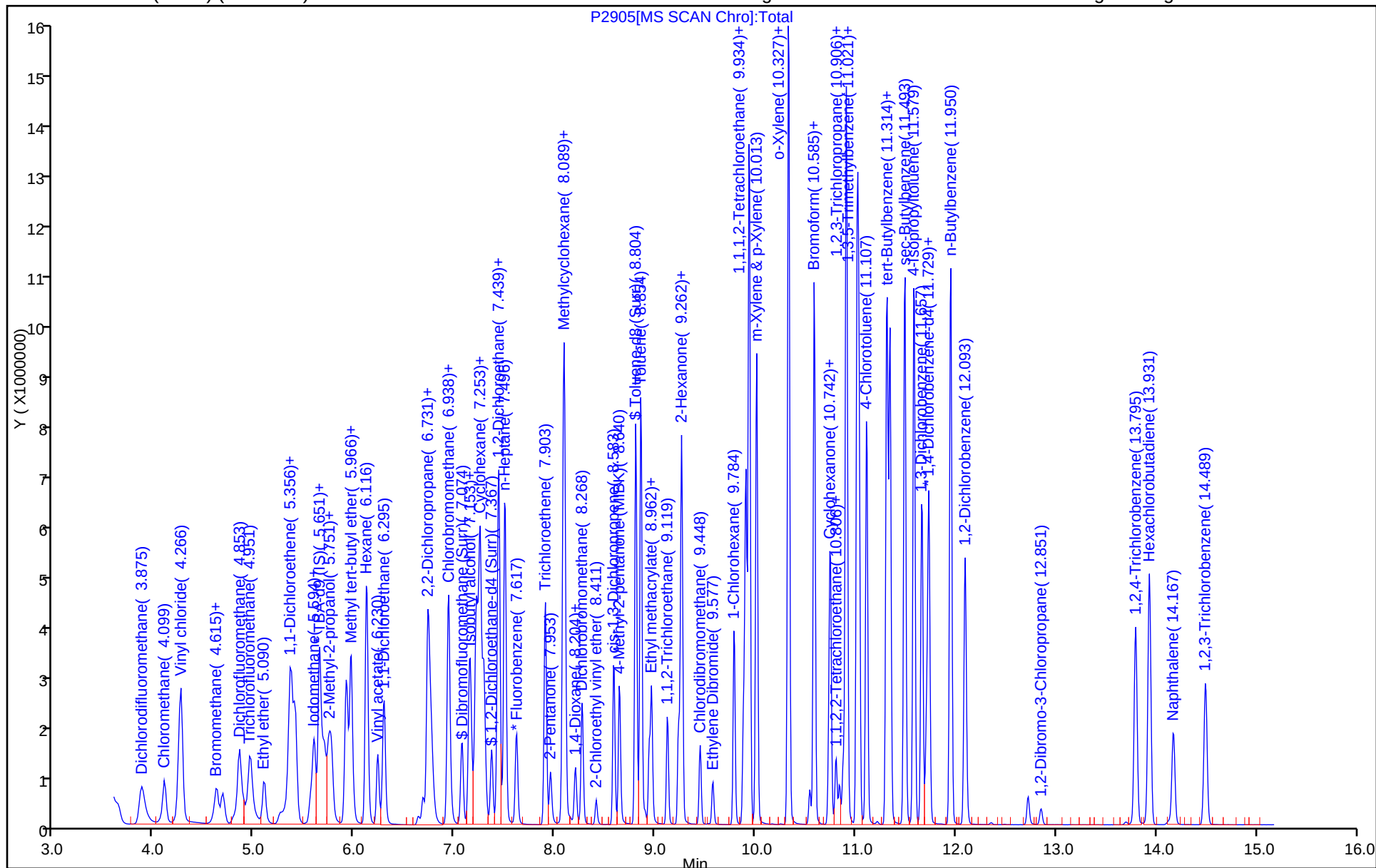
ALS Bottle#: 16

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

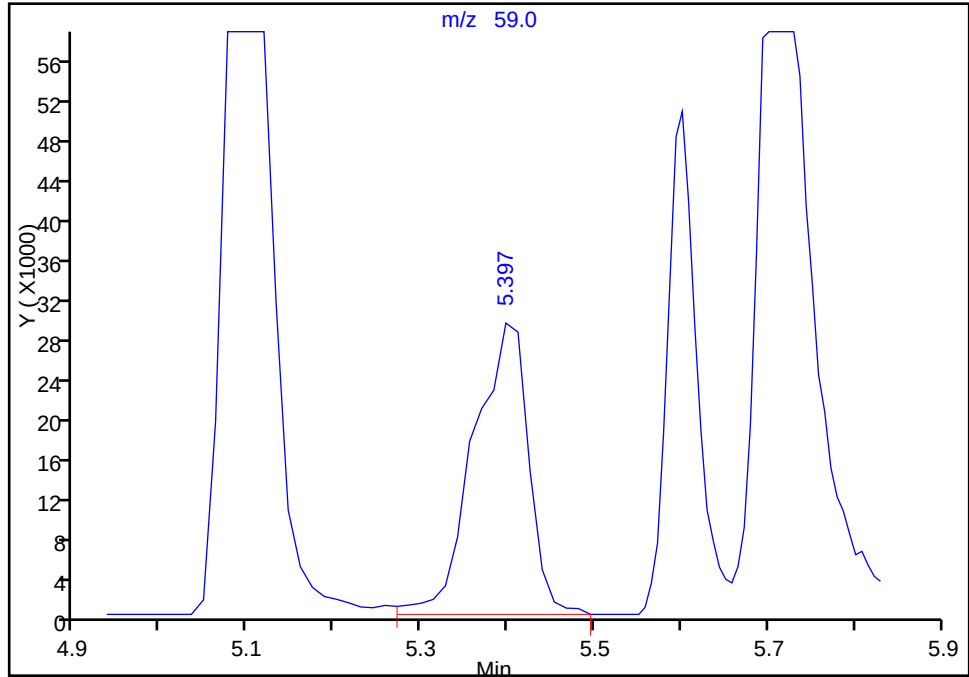
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Injection Date: 20-Oct-2016 11:32:30 Instrument ID: VMS_P
Lims ID: STD30
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector: MS SCAN

35 Ethyl ether, CAS: 60-29-7

Signal: 1

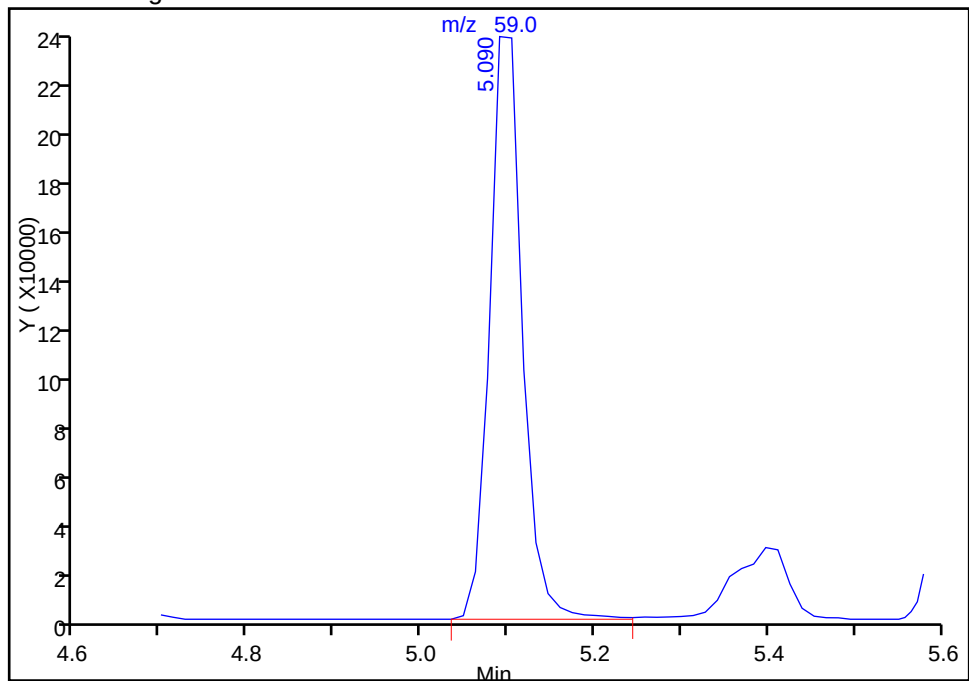
RT: 5.40
Area: 129227
Amount: 10.126944
Amount Units: ug/l

Processing Integration Results



RT: 5.09
Area: 628239
Amount: 33.839374
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 20-Oct-2016 16:48:01

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Lims ID: STD60
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 20-Oct-2016 11:51:30 ALS Bottle#: 17 Worklist Smp#: 16
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD60
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:32:10 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.643	5.644	-0.001	29	205363	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.617	-0.001	97	1790167	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.884	-0.001	89	373034	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.707	-0.001	97	570097	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.074	-0.001	92	2158139	60.0	54.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.367	-0.001	99	2196751	60.0	52.7	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.804	-0.001	96	8501726	60.0	52.2	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.749	-0.001	83	3180421	60.0	54.6	
23 Dichlorodifluoromethane	85	3.874	3.873	0.001	99	4071153	60.0	59.1	
26 Chloromethane	50	4.112	4.096	0.016	99	2858013	60.0	52.6	
27 Vinyl chloride	62	4.252	4.250	0.002	99	2835725	60.0	56.4	
29 Bromomethane	94	4.629	4.613	0.016	93	1692011	60.0	55.6	
30 Chloroethane	64	4.684	4.683	0.001	98	1643552	60.0	54.5	
31 Dichlorofluoromethane	67	4.852	4.850	0.002	99	4822486	60.0	53.6	
32 Trichlorofluoromethane	101	4.964	4.948	0.016	99	5054545	60.0	56.9	
35 Ethyl ether	59	5.103	5.102	0.001	94	1309695	60.0	57.9	a
39 Acrolein	56	5.257	5.255	0.002	99	813964	599.9	693.6	
40 1,1,2-Trichloro-1,2,2-trif	151	5.355	5.353	0.002	95	2268378	60.0	55.1	
41 Acetone	43	5.369	5.367	0.002	97	1185840	240.0	210.2	
43 1,1-Dichloroethene	96	5.411	5.409	0.002	94	2881934	60.0	57.5	
44 Iodomethane	142	5.586	5.586	0.000	97	3997922	60.0	58.7	
45 Methyl acetate	43	5.600	5.601	-0.001	99	3369678	300.0	289.7	
47 3-Chloro-1-propene	41	5.650	5.651	-0.001	87	5622408	60.0	61.9	
48 Carbon disulfide	76	5.700	5.694	0.006	99	10332687	60.0	59.9	
49 2-Methyl-2-propanol	59	5.714	5.715	-0.001	94	735100	600.0	621.5	
50 Methylene Chloride	84	5.764	5.751	0.013	98	2376565	60.0	57.8	
52 Acrylonitrile	53	5.922	5.922	0.000	96	3019007	600.0	653.1	
51 Methyl tert-butyl ether	73	5.922	5.922	0.000	99	3852600	60.0	63.5	
53 trans-1,2-Dichloroethene	96	5.965	5.965	0.000	93	2725590	60.0	56.9	
54 Hexane	57	6.122	6.123	-0.001	94	4753923	60.0	56.9	
55 Vinyl acetate	43	6.229	6.230	-0.001	97	5072575	120.0	121.8	
57 1,1-Dichloroethane	63	6.294	6.294	0.000	98	5248019	60.0	57.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.687	6.688	-0.001	99	1864391	240.0	229.4	
62 sec-Butyl Alcohol	45	6.730	6.730	0.000	41	879107	900.0	982.2	
63 cis-1,2-Dichloroethene	96	6.730	6.730	0.000	89	2611299	60.0	58.2	
64 2,2-Dichloropropane	77	6.758	6.752	0.006	89	3819943	60.0	60.9	
67 Chlorobromomethane	128	6.930	6.931	-0.001	92	834492	60.0	58.4	
68 Chloroform	83	6.937	6.938	-0.001	98	4681916	60.0	57.5	
69 Tetrahydrofuran	42	6.966	6.959	0.007	89	547955	120.0	121.0	
70 Isobutyl alcohol	41	7.144	7.145	-0.001	82	616900	1500.0	1489.2	
71 1,1,1-Trichloroethane	97	7.152	7.152	0.000	97	4469734	60.0	62.9	
72 Cyclohexane	56	7.223	7.217	0.006	98	5744473	60.0	59.3	
73 1,1-Dichloropropene	75	7.252	7.252	0.000	90	4138584	60.0	56.9	
74 Carbon tetrachloride	117	7.287	7.288	-0.001	96	4246634	60.0	62.9	
76 1,2-Dichloroethane	62	7.430	7.424	0.006	98	2782930	60.0	58.6	
77 Benzene	78	7.438	7.438	0.000	98	9941485	60.0	55.3	
14 n-Heptane	43	7.502	7.495	0.007	95	5666801	60.0	59.0	
79 Trichloroethene	95	7.902	7.903	-0.001	93	2871797	60.0	57.9	
80 2-Pentanone	43	7.952	7.960	-0.008	97	2025137	NC	NC	
82 Methylcyclohexane	55	8.088	8.082	0.006	95	4739195	60.0	57.0	
83 1,2-Dichloropropane	63	8.095	8.096	-0.001	87	2279373	60.0	56.3	
84 1,4-Dioxane	88	8.153	8.153	0.000	95	152981	1200.0	1124.9	
85 Dibromomethane	93	8.203	8.203	0.000	91	899386	60.0	60.7	
86 Dichlorobromomethane	83	8.267	8.268	-0.001	98	2958024	60.0	64.8	
87 2-Chloroethyl vinyl ether	63	8.410	8.411	-0.001	93	453021	60.0	61.9	
89 cis-1,3-Dichloropropene	75	8.589	8.589	0.000	88	3185401	60.0	59.3	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.640	0.006	99	3850227	240.0	233.2	
91 Toluene	91	8.861	8.854	0.006	97	10254291	60.0	55.1	
92 Ethyl methacrylate	69	8.939	8.940	-0.001	92	1409212	60.0	62.4	
93 trans-1,3-Dichloropropene	75	8.961	8.961	0.000	97	2367868	60.0	58.3	
94 1,1,2-Trichloroethane	97	9.125	9.119	0.006	96	1157521	60.0	58.6	
95 2-Hexanone	43	9.232	9.233	-0.001	97	2582875	240.0	237.0	
96 1,3-Dichloropropane	76	9.254	9.254	0.000	96	2138492	60.0	57.6	
97 Tetrachloroethene	164	9.268	9.269	-0.001	93	2096968	60.0	54.4	
98 Chlorodibromomethane	129	9.447	9.447	0.000	90	1517365	60.0	59.5	
100 Ethylene Dibromide	107	9.576	9.576	0.000	98	1112354	60.0	64.8	
101 1-Chlorohexane	91	9.790	9.784	0.006	87	1962990	30.0	32.5	
102 Chlorobenzene	112	9.904	9.905	-0.001	89	5959104	60.0	53.9	
103 Ethylbenzene	106	9.940	9.934	0.006	97	3719477	60.0	54.7	
104 1,1,1,2-Tetrachloroethane	131	9.940	9.941	-0.001	91	2001840	60.0	63.2	
105 m-Xylene & p-Xylene	106	10.012	10.012	0.000	98	4701178	60.0	57.4	
107 o-Xylene	106	10.333	10.327	0.006	85	4223788	60.0	56.3	
106 Styrene	104	10.333	10.334	-0.001	81	6228729	60.0	60.7	
108 Bromoform	173	10.541	10.541	0.000	94	636885	60.0	59.9	
109 Isopropylbenzene	105	10.584	10.584	0.000	99	11996025	60.0	55.7	
111 Cyclohexanone	55	10.734	10.734	0.000	96	1205475	2400.0	2436.2	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.806	-0.001	97	1240368	60.0	61.9	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.842	-0.001	89	408683	60.0	59.8	
114 1,2,3-Trichloropropane	110	10.877	10.877	0.000	90	349349	60.0	61.2	
115 N-Propylbenzene	120	10.905	10.906	-0.001	97	3386025	60.0	57.1	e
116 Bromobenzene	156	10.913	10.913	0.000	99	2209089	60.0	56.5	
117 1,3,5-Trimethylbenzene	105	11.013	11.013	0.000	94	10127946	60.0	58.0	
118 2-Chlorotoluene	126	11.034	11.035	-0.001	94	2679819	60.0	56.0	
119 4-Chlorotoluene	126	11.113	11.106	0.007	99	2831211	60.0	59.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.313	11.314	-0.001	91	10369842	60.0	59.5	
121 1,2,4-Trimethylbenzene	105	11.342	11.342	0.000	96	10366889	60.0	57.9	
122 sec-Butylbenzene	134	11.492	11.492	0.000	97	2885998	60.0	59.0	
123 4-Isopropyltoluene	119	11.585	11.585	0.000	95	11580973	60.0	57.9	
124 1,3-Dichlorobenzene	146	11.663	11.664	-0.001	94	5102970	60.0	58.1	
126 1,4-Dichlorobenzene	146	11.735	11.728	0.007	90	4908233	60.0	55.8	
127 n-Butylbenzene	91	11.949	11.950	-0.001	97	12256524	60.0	57.2	
128 1,2-Dichlorobenzene	146	12.092	12.093	-0.001	93	4218856	60.0	58.9	
129 1,2-Dibromo-3-Chloropropan	157	12.850	12.851	-0.001	73	180374	60.0	59.9	
130 1,2,4-Trichlorobenzene	180	13.794	13.795	-0.001	93	3011469	60.0	63.6	
131 Hexachlorobutadiene	225	13.937	13.931	0.006	95	2320803	60.0	59.4	
132 Naphthalene	128	14.173	14.167	0.006	98	4032452	60.0	58.6	
133 1,2,3-Trichlorobenzene	180	14.495	14.488	0.007	93	2307781	60.0	64.8	
S 140 1,2-Dichloroethene, Total	96				0		120.0	115.2	
S 134 Trihalomethanes, Total	1				0		240.0	241.7	
S 135 Xylenes, Total (URS)	1				0		120.0	113.7	
S 136 Total BTEX	1				0			278.8	
S 137 1,3-Dichloropropene, Total	1				0		120.0	117.6	
S 138 1,2-Dichloroethene, Total	1				0		120.0	115.2	
S 139 Xylenes, Total	106				0		120.0	113.7	

QC Flag Legend

Processing Flags

NC - Not Calibrated

e - Potential Peak Saturated

Review Flags

a - User Assigned ID

Reagents:

MV-Gas/Ket A_00052	Amount Added: 30.00	Units: uL
MV-Main A_00027	Amount Added: 30.00	Units: uL
MV-2cleve+AVA_00017	Amount Added: 30.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 4.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D

Injection Date: 20-Oct-2016 11:51:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD60

Worklist Smp#: 16

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

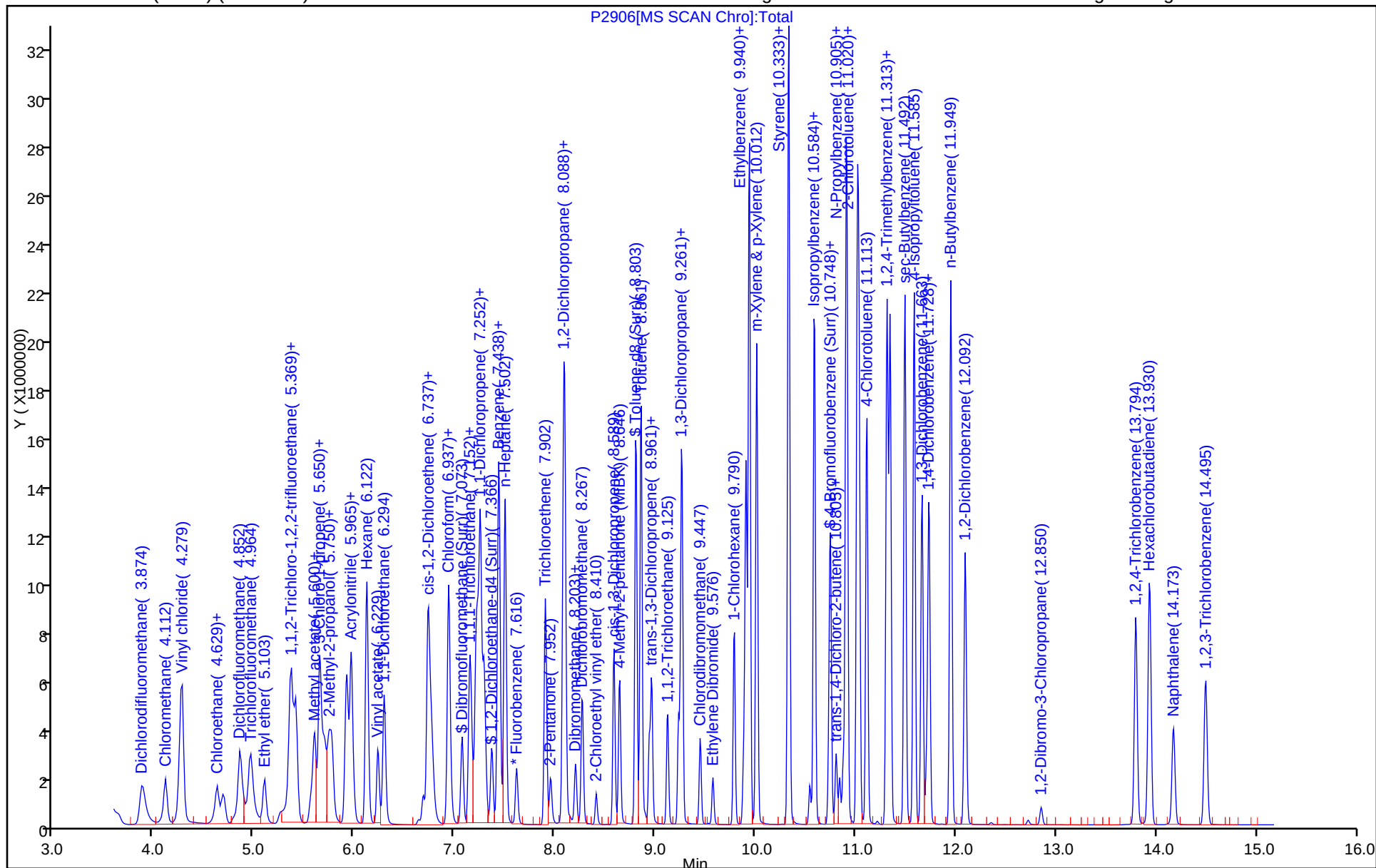
ALS Bottle#: 17

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

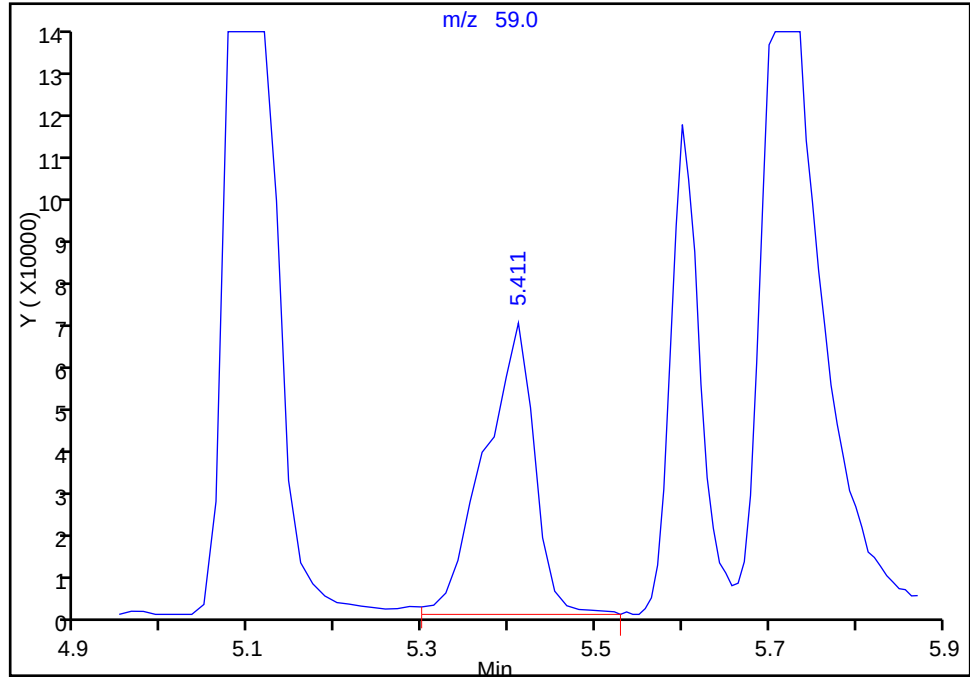
Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
Injection Date: 20-Oct-2016 11:51:30 Instrument ID: VMS_P
Lims ID: STD60
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector: MS SCAN

35 Ethyl ether, CAS: 60-29-7

Signal: 1

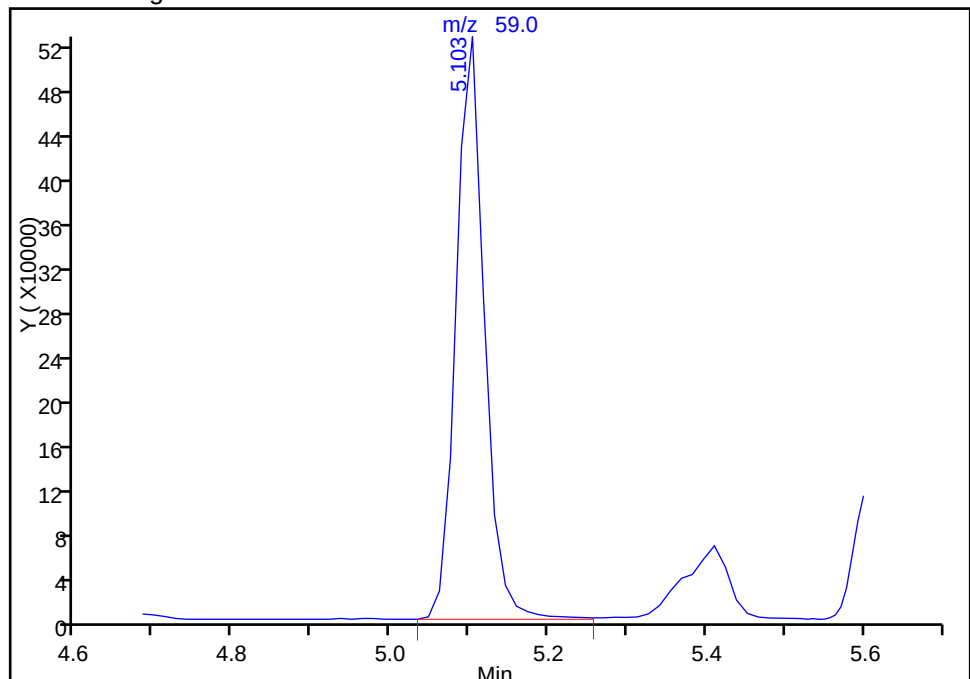
RT: 5.41
Area: 264976
Amount: 13.512764
Amount Units: ug/l

Processing Integration Results



RT: 5.10
Area: 1309695
Amount: 57.875220
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 20-Oct-2016 16:48:18

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 350126

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/07/2016 11:12 Calibration End Date: 11/07/2016 12:50 Calibration ID: 27509

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-350126/10	P3699.D
Level 2	STD020 280-350126/11	P3700.D
Level 3	STD050 280-350126/12	P3701.D
Level 4	STD10 280-350126/13	P3702.D
Level 5	STD30 280-350126/14	P3703.D
Level 6	STD60 280-350126/15	P3704.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acrolein	0.0268 0.0357	0.0267	0.0306	0.0301	0.0341	Ave		0.0307				12.0		15.0			
Vinyl acetate	0.3649 0.5980	0.3902	0.4806	0.5445	0.6019	Lin2	-0.488	0.5719							0.9920		0.9900
2-Chloroethyl vinyl ether	++++ 0.1105	0.0462	0.0544	0.0694	0.1044	Lin1	-0.196	0.1103							0.9910		0.9900
Dibromofluoromethane (Surr)	++++ 0.2921	0.2714	0.2939	0.2813	0.2830	Ave		0.2843				3.2		15.0			
1,2-Dichloroethane-d4 (Surr)	++++ 0.2599	0.2438	0.2713	0.2643	0.2606	Ave		0.2600				3.9		15.0			
Toluene-d8 (Surr)	++++ 5.8125	4.3254	4.9843	5.0761	5.6022	Ave		5.1601				11.3		15.0			
4-Bromofluorobenzene (Surr)	++++ 1.2696	0.7887	0.8977	0.9839	1.1941	Lin2	-0.889	1.1780							0.9900		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-90232-1 Analy Batch No.: 350126

SDG No.: _____

Instrument ID: VMS_P GC Column: DB-624 (60. ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/07/2016 11:12 Calibration End Date: 11/07/2016 12:50 Calibration ID: 27509

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD010 280-350126/10	P3699.D
Level 2	STD020 280-350126/11	P3700.D
Level 3	STD050 280-350126/12	P3701.D
Level 4	STD10 280-350126/13	P3702.D
Level 5	STD30 280-350126/14	P3703.D
Level 6	STD60 280-350126/15	P3704.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrolein	FB	Ave	30547 2652625	61439	174048	356686	1282065	10.00 600	20.0	50.0	100.0	300
Vinyl acetate	FB	Lin2	83199 8876657	179529	546103	1290118	4530868	2.00 120	4.00	10.0	20.0	60.0
2-Chloroethyl vinyl ether	FB	Lin1	++++ 820236	10638	30882	82217	392895	++++ 60.0	2.00	5.00	10.0	30.0
Dibromofluoromethane (Surr)	FB	Ave	++++ 2168306	62425	166975	333231	1065016	++++ 60.0	2.00	5.00	10.0	30.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	++++ 1928761	56084	154152	313094	981034	++++ 60.0	2.00	5.00	10.0	30.0
Toluene-d8 (Surr)	CBNZ d5	Ave	++++ 9074160	209261	590146	1261330	4417398	++++ 60.0	2.00	5.00	10.0	30.0
4-Bromofluorobenzene (Surr)	DCBd 4	Lin2	++++ 2928370	53498	154017	335857	1342576	++++ 60.0	2.00	5.00	10.0	30.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3699.D
 Lims ID: STD010
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 07-Nov-2016 11:12:30 ALS Bottle#: 17 Worklist Smp#: 10
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD010
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub134
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 07-Nov-2016 15:10:44 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK027

First Level Reviewer: seifertj

Date: 07-Nov-2016 11:45:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.652	5.658	-0.006	92	120349	250.0	250.0	
* 1 Fluorobenzene	96	7.618	7.617	0.001	98	1424939	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.885	9.884	0.001	89	293778	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.708	11.707	0.001	97	410002	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.067	7.074	-0.007	90	32769	1.00	1.01	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.375	7.374	0.001	98	30713	1.00	1.04	
\$ 7 Toluene-d8 (Surr)	98	8.805	8.811	-0.006	94	108350	1.00	0.8934	
\$ 8 4-Bromofluorobenzene (Surr	95	10.750	10.749	0.001	86	28319	1.00	1.49	
39 Acrolein	56	5.269	5.269	0.000	98	30547	10.0	8.73	
55 Vinyl acetate	43	6.238	6.237	0.001	97	83199	2.00	2.13	
87 2-Chloroethyl vinyl ether	63	8.412	8.411	0.001	88	4390	1.00	2.13	

Reagents:

MV-2cleve+AVA_00018	Amount Added: 0.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.08	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3699.D

Injection Date: 07-Nov-2016 11:12:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD010

Worklist Smp#: 10

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

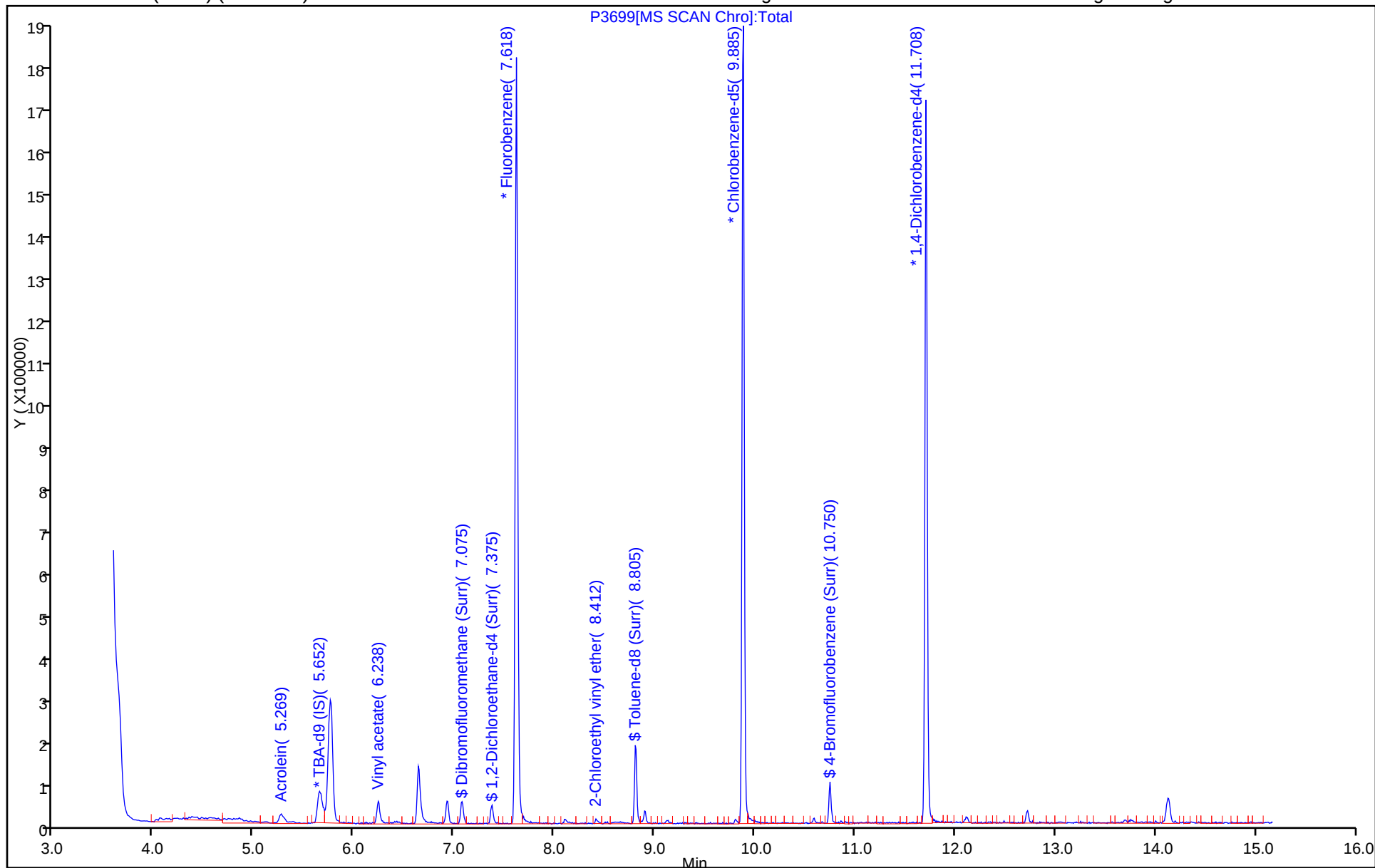
ALS Bottle#: 17

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3700.D
 Lims ID: STD020
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 07-Nov-2016 11:32:30 ALS Bottle#: 18 Worklist Smp#: 11
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD020
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub134
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 07-Nov-2016 15:10:45 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK027

First Level Reviewer: seifertj

Date: 07-Nov-2016 12:07:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.644	5.658	-0.014	91	129793	250.0	250.0	
* 1 Fluorobenzene	96	7.618	7.617	0.001	98	1437717	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	88	302373	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.708	11.707	0.001	97	423947	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.074	7.074	0.000	91	62425	2.00	1.91	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.367	7.374	-0.007	97	56084	2.00	1.88	
\$ 7 Toluene-d8 (Surr)	98	8.805	8.811	-0.006	96	209261	2.00	1.68	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	93	53498	2.00	2.09	
39 Acrolein	56	5.257	5.269	-0.012	99	61439	20.0	17.4	
55 Vinyl acetate	43	6.238	6.237	0.001	97	179529	4.00	3.58	
87 2-Chloroethyl vinyl ether	63	8.418	8.411	0.007	89	10638	2.00	2.61	

Reagents:

MV-2cleve+AVA_00018	Amount Added: 1.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.16	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3700.D

Injection Date: 07-Nov-2016 11:32:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD020

Worklist Smp#: 11

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

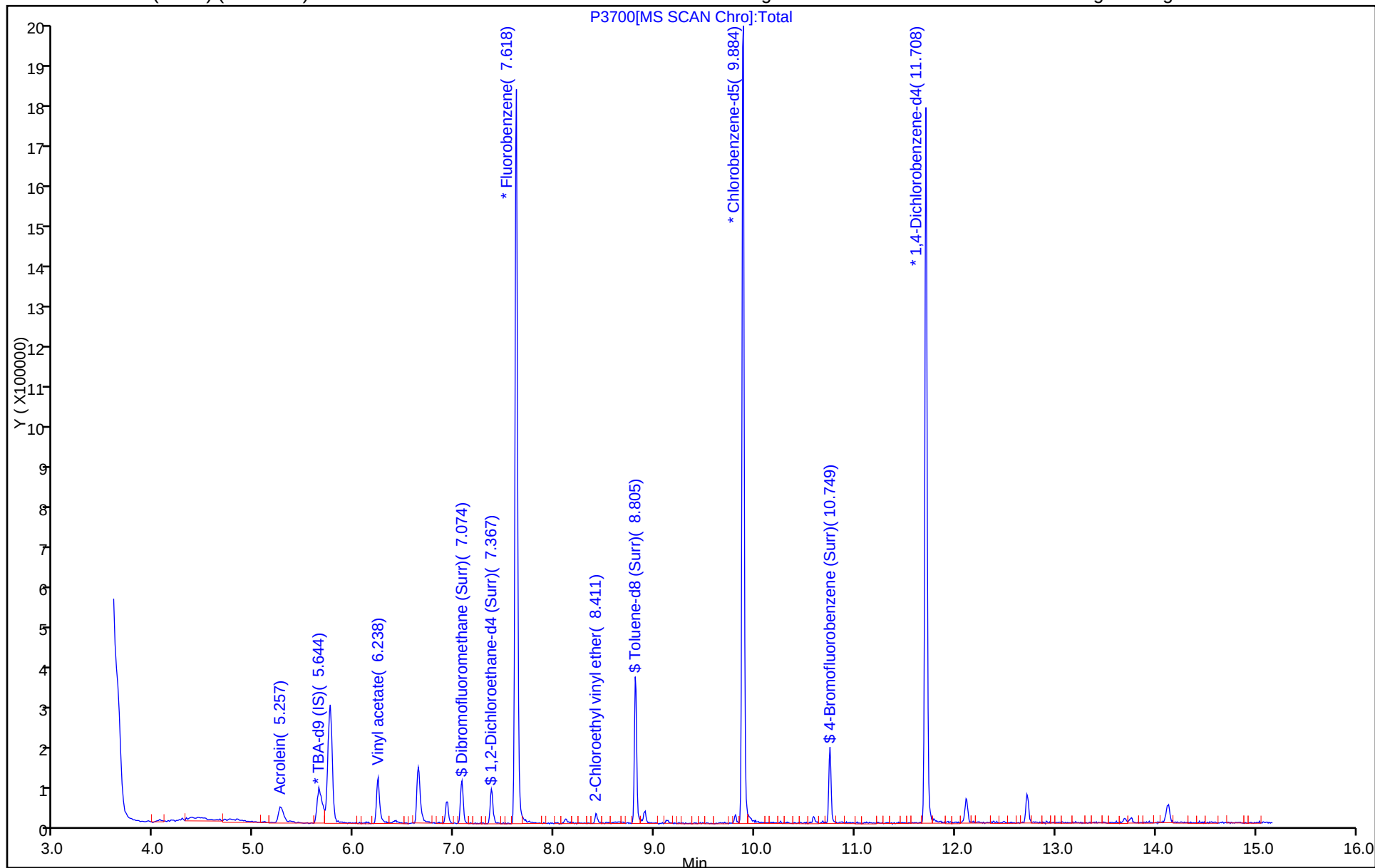
ALS Bottle#: 18

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3701.D
 Lims ID: STD050
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 07-Nov-2016 11:51:30 ALS Bottle#: 19 Worklist Smp#: 12
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD050
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub134
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 07-Nov-2016 15:10:47 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK027

First Level Reviewer: seifertj

Date: 07-Nov-2016 12:23:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.659	5.658	0.000	95	130513	250.0	250.0	
* 1 Fluorobenzene	96	7.618	7.617	0.001	98	1420239	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	89	296002	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.708	11.707	0.001	97	428898	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.074	7.074	0.000	92	166975	5.00	5.17	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.375	7.374	0.001	98	154152	5.00	5.22	
\$ 7 Toluene-d8 (Surr)	98	8.812	8.811	0.001	95	590146	5.00	4.83	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	89	154017	5.00	4.57	
39 Acrolein	56	5.272	5.269	0.003	98	174048	50.0	49.9	
55 Vinyl acetate	43	6.238	6.237	0.001	98	546103	10.0	9.26	
87 2-Chloroethyl vinyl ether	63	8.411	8.411	0.000	90	30882	5.00	4.24	

Reagents:

MV-2cleve+AVA_00018	Amount Added: 2.50	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.40	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3701.D

Injection Date: 07-Nov-2016 11:51:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD050

Worklist Smp#: 12

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

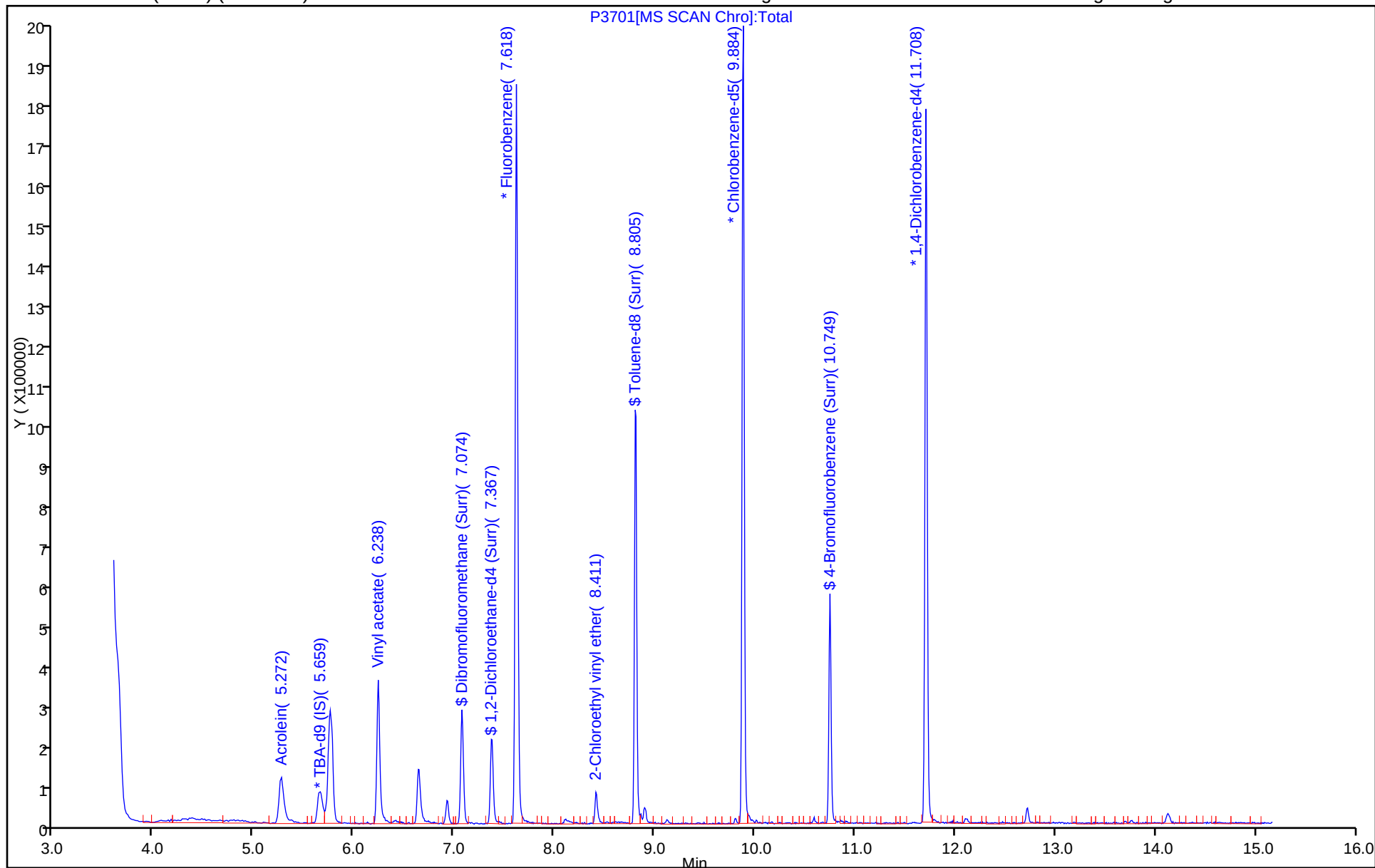
ALS Bottle#: 19

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3702.D
 Lims ID: STD10
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 07-Nov-2016 12:11:30 ALS Bottle#: 20 Worklist Smp#: 13
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD10
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub134
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 07-Nov-2016 15:10:49 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK027

First Level Reviewer: seifertj

Date: 07-Nov-2016 12:37:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.650	0.000	90	125796	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	1480747	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	89	310605	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.706	0.000	97	426704	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	92	333231	10.0	9.89	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.373	7.373	0.000	99	313094	10.0	10.2	
\$ 7 Toluene-d8 (Surr)	98	8.810	8.810	0.000	95	1261330	10.0	9.84	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	88	335857	10.0	9.11	
39 Acrolein	56	5.272	5.272	0.000	98	356686	100.0	98.1	
55 Vinyl acetate	43	6.236	6.236	0.000	98	1290118	20.0	19.9	
87 2-Chloroethyl vinyl ether	63	8.410	8.410	0.000	92	82217	10.0	8.07	

Reagents:

MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3702.D

Injection Date: 07-Nov-2016 12:11:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD10

Worklist Smp#: 13

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

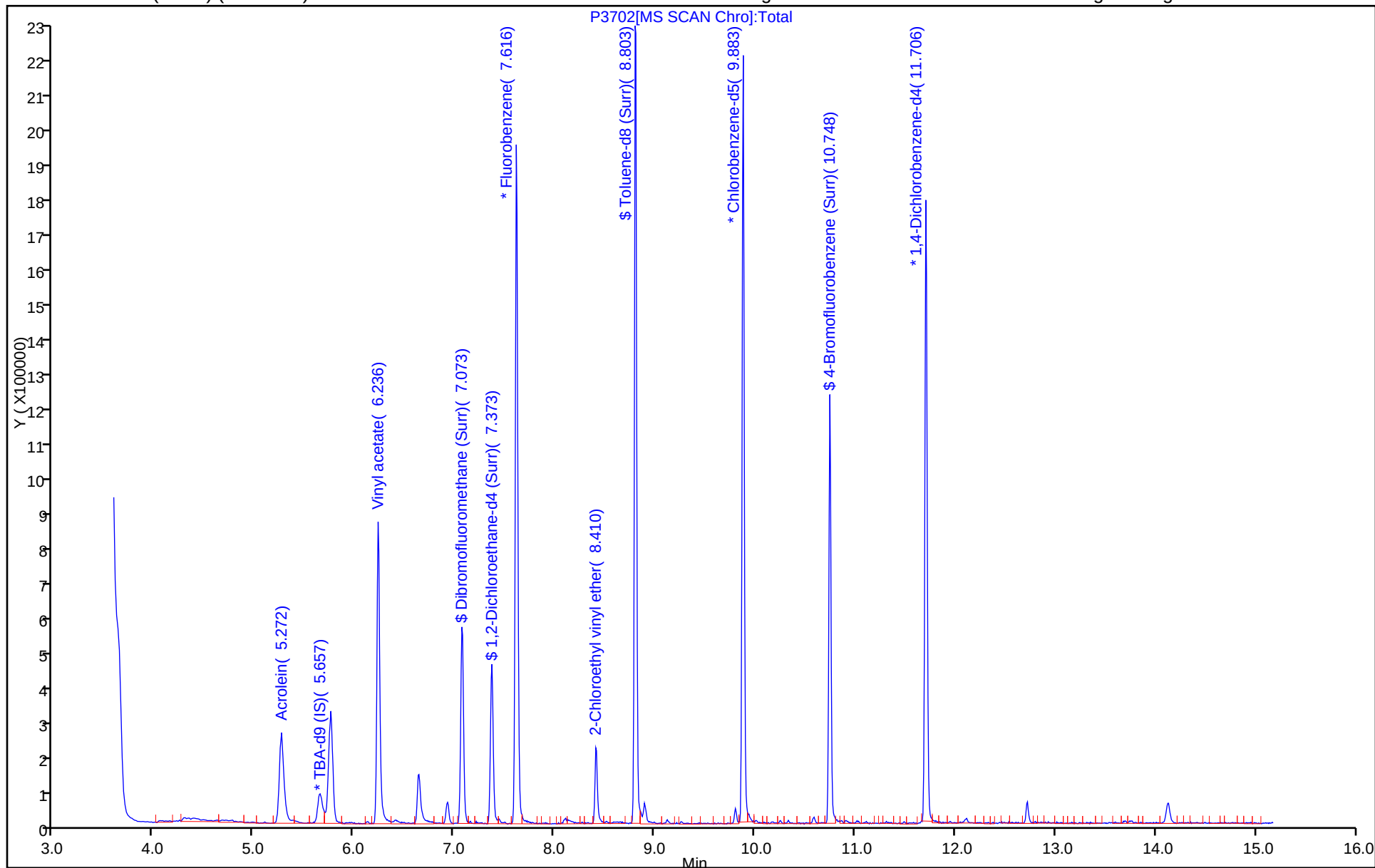
ALS Bottle#: 20

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3703.D
 Lims ID: STD30
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 07-Nov-2016 12:30:30 ALS Bottle#: 21 Worklist Smp#: 14
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD30
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub134
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 07-Nov-2016 15:10:50 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK027

First Level Reviewer: seifertj

Date: 07-Nov-2016 12:49:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.650	0.000	91	128612	250.0	250.0	
* 1 Fluorobenzene	96	7.617	7.616	0.001	98	1568282	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	89	328547	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.707	11.706	0.001	97	468491	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	92	1065016	30.0	29.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.374	7.373	0.001	99	981034	30.0	30.1	
\$ 7 Toluene-d8 (Surr)	98	8.804	8.810	-0.006	95	4417398	30.0	32.6	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	1342576	30.0	31.2	
39 Acrolein	56	5.270	5.272	-0.002	99	1282065	300.0	333.1	
55 Vinyl acetate	43	6.237	6.236	0.001	97	4530868	60.0	64.0	
87 2-Chloroethyl vinyl ether	63	8.410	8.410	0.000	93	392895	30.0	30.2	

Reagents:

MV-2cleve+AVA_00018	Amount Added: 15.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 2.40	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3703.D

Injection Date: 07-Nov-2016 12:30:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD30

Worklist Smp#: 14

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

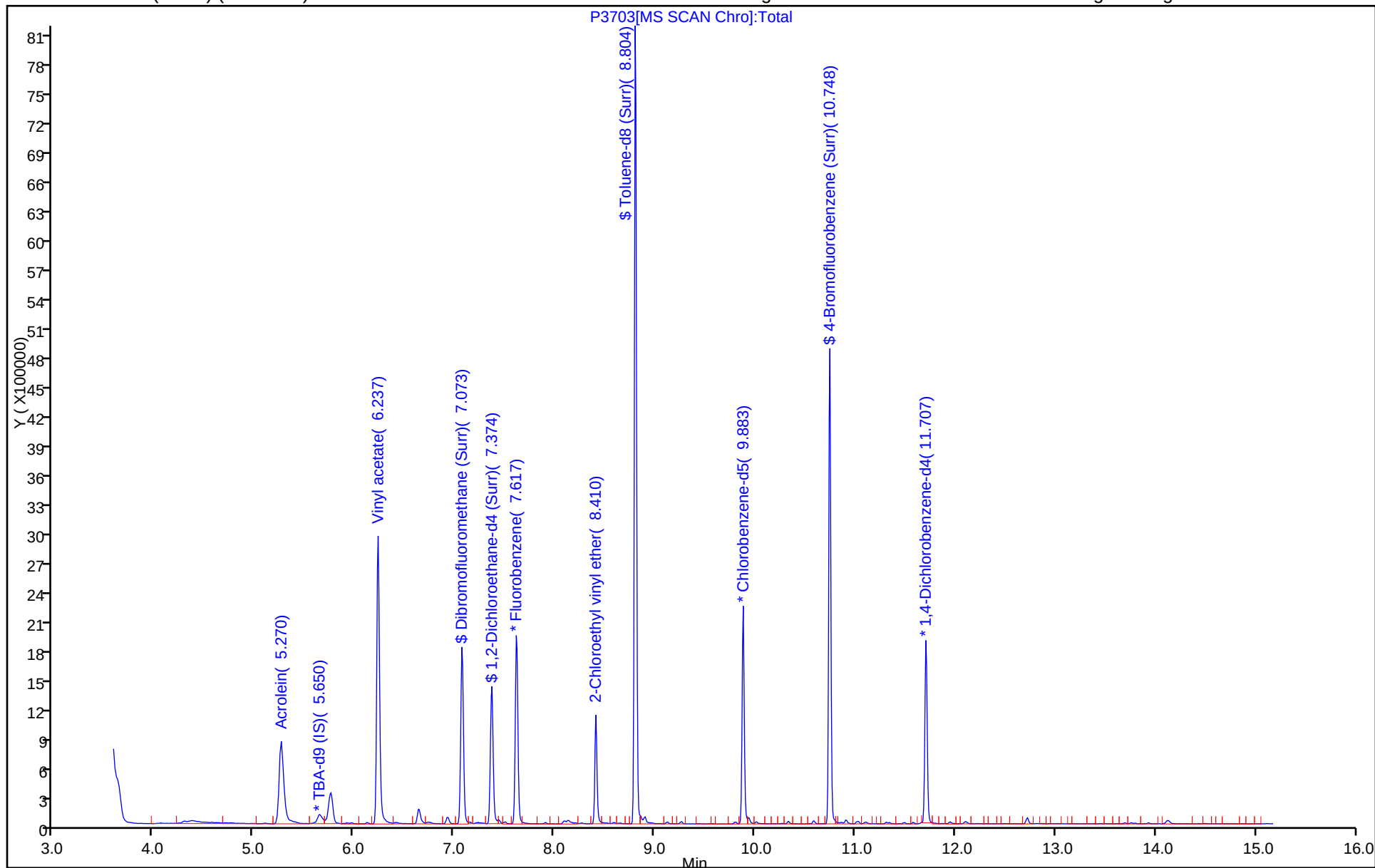
ALS Bottle#: 21

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Lims ID: STD60
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 07-Nov-2016 12:50:30 ALS Bottle#: 22 Worklist Smp#: 15
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: STD60
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub134
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 07-Nov-2016 15:10:51 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK027

First Level Reviewer: seifertj

Date: 07-Nov-2016 13:10:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.643	5.650	-0.007	91	146245	250.0	250.0	
* 1 Fluorobenzene	96	7.617	7.616	0.001	98	1546242	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	89	325241	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.706	0.000	97	480531	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.066	7.073	-0.007	92	2168306	60.0	61.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.373	-0.007	99	1928761	60.0	60.0	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.810	-0.007	95	9074160	60.0	67.6	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	2928370	60.0	65.4	
39 Acrolein	56	5.255	5.272	-0.017	99	2652625	599.9	698.9	
55 Vinyl acetate	43	6.229	6.236	-0.007	98	8876657	120.0	126.3	
87 2-Chloroethyl vinyl ether	63	8.410	8.410	0.000	93	820236	60.0	61.9	

Reagents:

MV-2cleve+AVA_00018	Amount Added: 30.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 4.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D

Injection Date: 07-Nov-2016 12:50:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: STD60

Worklist Smp#: 15

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

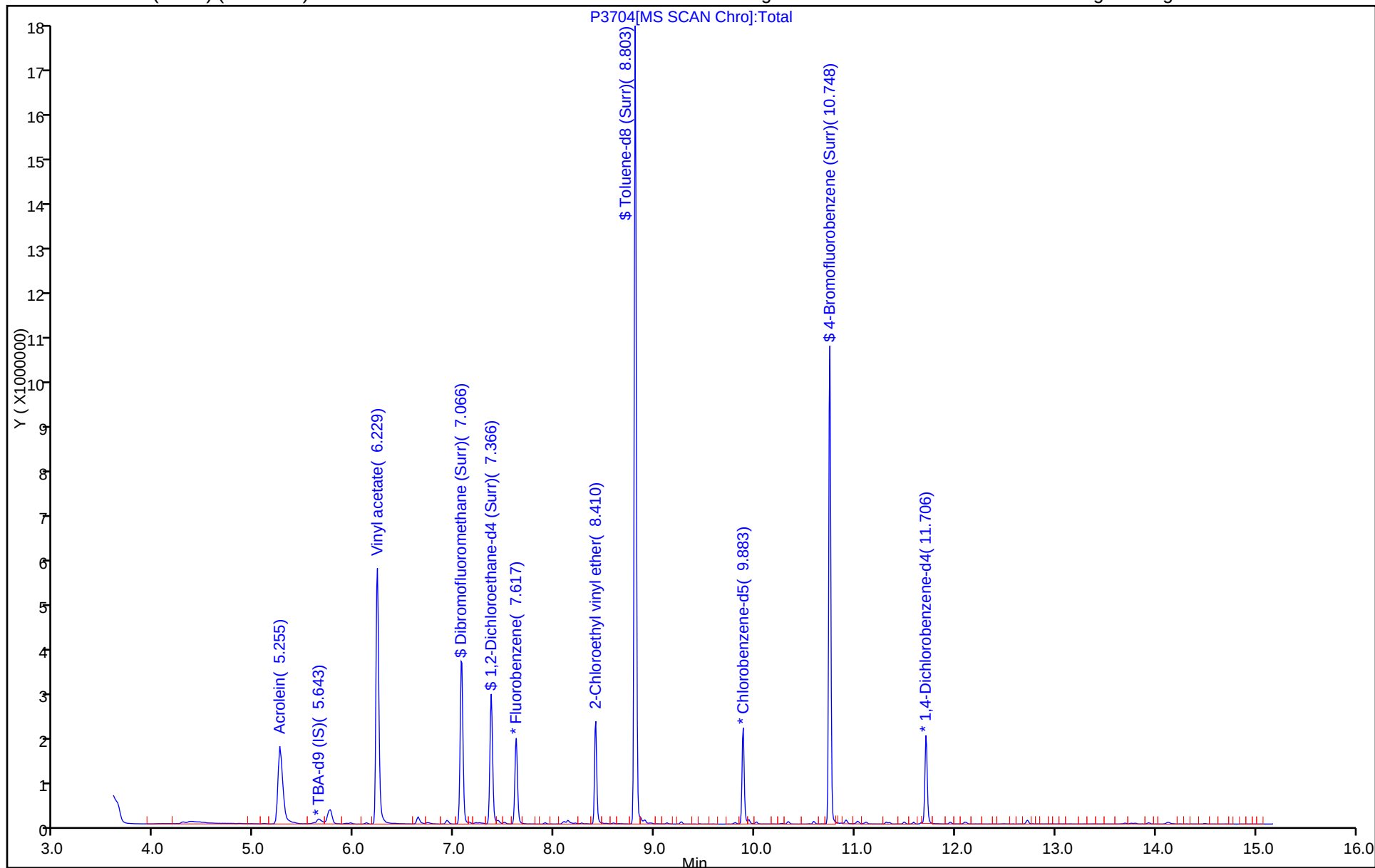
ALS Bottle#: 22

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: ICV 280-345574/30 Calibration Date: 10/08/2016 04:16
Instrument ID: VMS_H Calib Start Date: 07/21/2016 23:31
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 07/22/2016 01:26
Lab File ID: H9974.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropyl alcohol	Ave	0.0045	0.0000			100	-99.9*	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9974.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 08-Oct-2016 04:16:30 ALS Bottle#: 19 Worklist Smp#: 30
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICV
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:20 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:23:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.002	3.985	0.017	95	303491	250.0	250.0	
* 2 Fluorobenzene	96	6.771	6.771	0.000	99	1682754	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.125	11.125	0.000	87	464237	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.120	14.121	-0.001	95	726975	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.935	5.935	0.000	94	826904	10.0	10.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.370	6.353	0.017	96	317492	10.0	10.6	
\$ 10 Toluene-d8 (Surr)	98	8.895	8.896	-0.001	92	1731041	10.0	10.1	
\$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.780	-0.001	89	904967	10.0	10.2	
34 Ethylene oxide	43	2.661	2.644	0.017	98	573075	1000.0	834.3	
39 Ethanol	45	3.166	3.166	0.000	94	49983	400.0	455.6	
43 Propene oxide	58	3.322	3.306	0.016	96	2744978	1000.0	887.4	
49 Isopropyl alcohol	45	3.496	3.515	-0.019	1	37	NC	NC	
51 Acetonitrile	41	3.827	3.828	-0.001	98	73415	100.0	80.9	
62 Isopropyl ether	87	4.768	4.751	0.017	98	420460	10.0	11.0	
63 2-Chloro-1,3-butadiene	53	4.803	4.803	0.000	88	682452	10.0	9.94	
64 Tert-butyl ethyl ether	59	5.186	5.169	0.017	99	1344484	10.0	11.0	
69 Ethyl acetate	43	5.430	5.430	0.000	99	417816	20.0	22.3	
70 Propionitrile	54	5.464	5.483	-0.019	97	138484	100.0	111.6	
72 Methacrylonitrile	41	5.639	5.639	0.000	94	1008788	100.0	108.3	
83 Tert-amyl methyl ether	73	6.562	6.562	0.000	98	1074071	10.0	11.4	
85 n-Butanol	56	7.171	7.172	-0.001	86	94291	250.0	278.4	
91 Methyl methacrylate	100	7.676	7.677	-0.001	95	167268	20.0	20.8	
95 2-Nitropropane	41	8.216	8.217	-0.001	97	72307	20.0	20.6	
107 Tetrahydrothiophene	60	10.149	10.150	-0.001	45	20314	20.0	17.0	
119 cis-1,4-Dichloro-2-butene	53	12.675	12.675	0.000	94	184104	20.0	22.2	
135 1,2,3-Trimethylbenzene	105	14.207	14.191	0.017	97	1695701	10.0	10.4	
140 1,3,5-Trichlorobenzene	180	15.513	15.514	-0.001	98	959493	10.0	10.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Supp B_00014	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9974.D

Injection Date: 08-Oct-2016 04:16:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: ICV

Worklist Smp#: 30

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

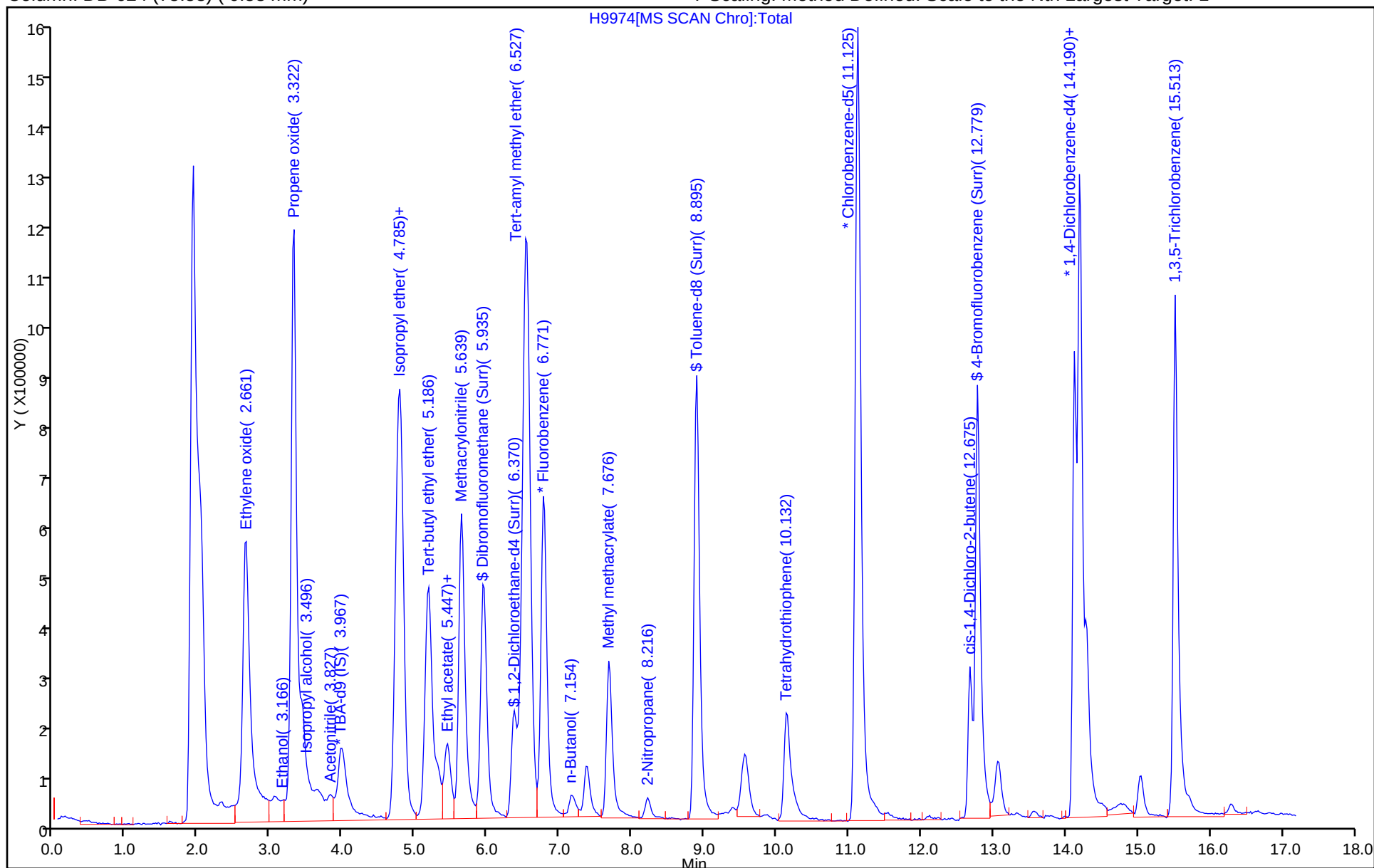
ALS Bottle#: 19

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: ICV 280-345574/30 Calibration Date: 10/08/2016 04:16

Instrument ID: VMS_H Calib Start Date: 10/08/2016 01:33

GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 10/08/2016 03:30

Lab File ID: H9974.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0008	0.0009		456	400	13.9	20.0
Acetonitrile	Lin1		0.0055		80.9	100	-19.1	20.0
Isopropyl ether	Ave	0.2840	0.3123		11.0	10.0	10.0	20.0
2-Chloro-1,3-butadiene	Ave	0.5098	0.5070		9.94	10.0	-0.6	20.0
Tert-butyl ethyl ether	Ave	0.9049	0.999		11.0	10.0	10.4	20.0
Ethyl acetate	Ave	0.1394	0.1552		22.3	20.0	11.3	20.0
Propionitrile	Ave	0.0092	0.0103		112	100	11.6	20.0
Methacrylonitrile	Ave	0.0692	0.0749		108	100	8.3	20.0
Tert-amyl methyl ether	Ave	0.7025	0.7979		11.4	10.0	13.6	20.0
n-Butanol	Lin2		0.0028		278	250	11.4	20.0
Methyl methacrylate	Ave	0.0597	0.0621		20.8	20.0	4.0	20.0
2-Nitropropane	Ave	0.0261	0.0269		20.6	20.0	3.0	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1425	0.1583		22.2	20.0	11.1	20.0
1,2,3-Trimethylbenzene	Ave	2.806	2.916		10.4	10.0	3.9	20.0
Dibromofluoromethane (Surr)	Ave	0.6017	0.6143		10.2	10.0	2.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2221	0.2358		10.6	10.0	6.2	20.0
Toluene-d8 (Surr)	Ave	4.602	4.661		10.1	10.0	1.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.532	1.556		10.2	10.0	1.6	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9974.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 08-Oct-2016 04:16:30 ALS Bottle#: 19 Worklist Smp#: 30
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICV
 Operator ID: bergerb Instrument ID: VMS_H
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Oct-2016 11:36:20 Calib Date: 08-Oct-2016 03:30:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK024

First Level Reviewer: moanm

Date: 09-Oct-2016 11:23:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.002	3.985	0.017	95	303491	250.0	250.0	
* 2 Fluorobenzene	96	6.771	6.771	0.000	99	1682754	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.125	11.125	0.000	87	464237	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.120	14.121	-0.001	95	726975	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.935	5.935	0.000	94	826904	10.0	10.2	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.370	6.353	0.017	96	317492	10.0	10.6	
\$ 10 Toluene-d8 (Surr)	98	8.895	8.896	-0.001	92	1731041	10.0	10.1	
\$ 11 4-Bromofluorobenzene (Surr	95	12.779	12.780	-0.001	89	904967	10.0	10.2	
34 Ethylene oxide	43	2.661	2.644	0.017	98	573075	1000.0	834.3	
39 Ethanol	45	3.166	3.166	0.000	94	49983	400.0	455.6	
43 Propene oxide	58	3.322	3.306	0.016	96	2744978	1000.0	887.4	
49 Isopropyl alcohol	45	3.496	3.515	-0.019	1	37	NC	NC	
51 Acetonitrile	41	3.827	3.828	-0.001	98	73415	100.0	80.9	
62 Isopropyl ether	87	4.768	4.751	0.017	98	420460	10.0	11.0	
63 2-Chloro-1,3-butadiene	53	4.803	4.803	0.000	88	682452	10.0	9.94	
64 Tert-butyl ethyl ether	59	5.186	5.169	0.017	99	1344484	10.0	11.0	
69 Ethyl acetate	43	5.430	5.430	0.000	99	417816	20.0	22.3	
70 Propionitrile	54	5.464	5.483	-0.019	97	138484	100.0	111.6	
72 Methacrylonitrile	41	5.639	5.639	0.000	94	1008788	100.0	108.3	
83 Tert-amyl methyl ether	73	6.562	6.562	0.000	98	1074071	10.0	11.4	
85 n-Butanol	56	7.171	7.172	-0.001	86	94291	250.0	278.4	
91 Methyl methacrylate	100	7.676	7.677	-0.001	95	167268	20.0	20.8	
95 2-Nitropropane	41	8.216	8.217	-0.001	97	72307	20.0	20.6	
107 Tetrahydrothiophene	60	10.149	10.150	-0.001	45	20314	20.0	17.0	
119 cis-1,4-Dichloro-2-butene	53	12.675	12.675	0.000	94	184104	20.0	22.2	
135 1,2,3-Trimethylbenzene	105	14.207	14.191	0.017	97	1695701	10.0	10.4	
140 1,3,5-Trichlorobenzene	180	15.513	15.514	-0.001	98	959493	10.0	10.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Supp B_00014	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9974.D

Injection Date: 08-Oct-2016 04:16:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: ICV

Worklist Smp#: 30

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

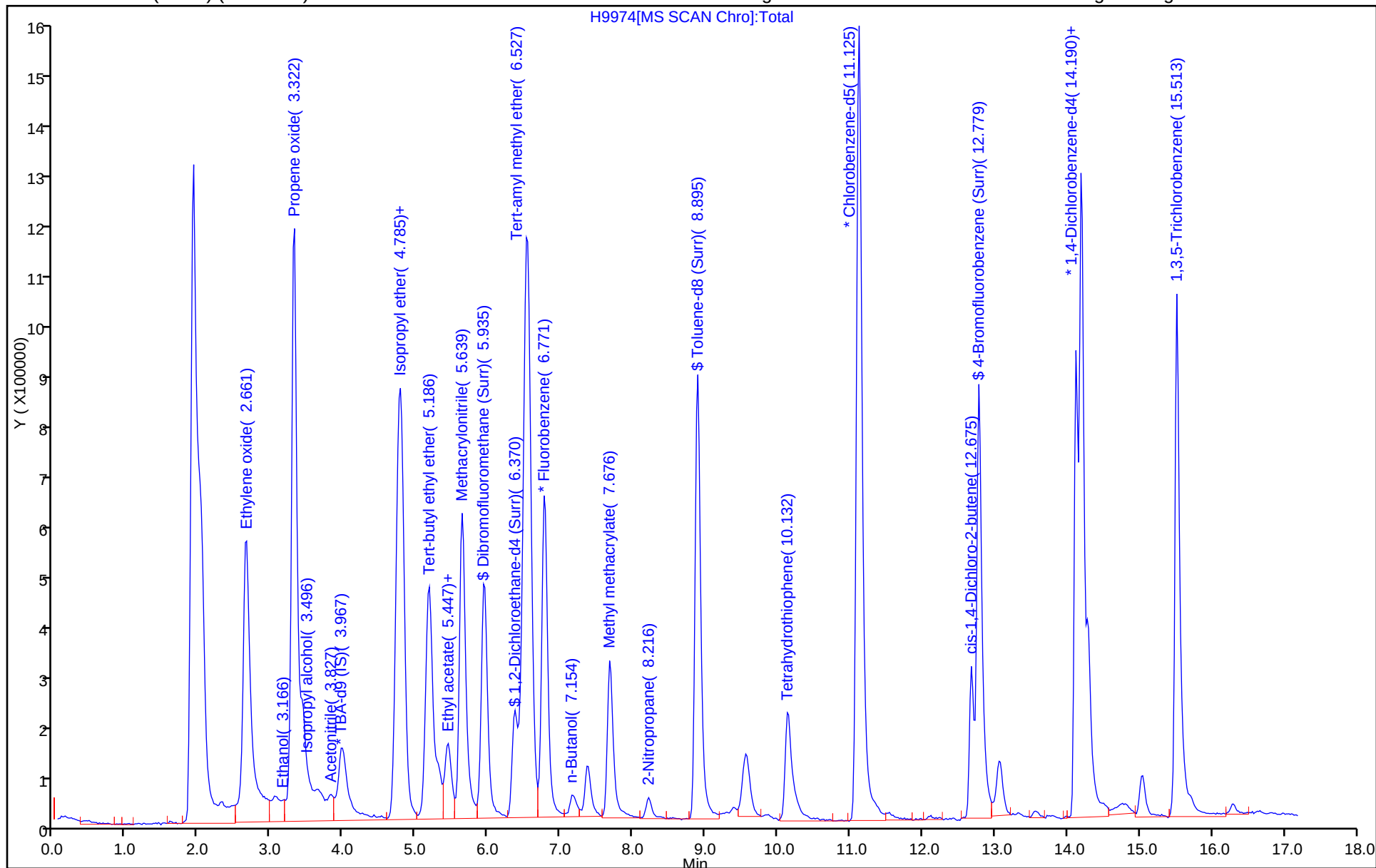
ALS Bottle#: 19

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: ICV 280-349323/17 Calibration Date: 11/02/2016 15:24

Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22

Lab File ID: H1095.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.3645		9.09	10.0	-9.1	20.0
Chloromethane	Lin1		0.2464	0.1000	8.09	10.0	-19.1	20.0
Vinyl chloride	Ave	0.3061	0.2804		9.16	10.0	-8.4	20.0
Bromomethane	Ave	0.2731	0.2460		9.01	10.0	-9.9	20.0
Chloroethane	Ave	0.2113	0.1873		8.86	10.0	-11.4	20.0
Dichlorofluoromethane	Ave	0.7483	0.7025		9.39	10.0	-6.1	20.0
Trichlorofluoromethane	Ave	0.5124	0.5205		10.2	10.0	1.6	20.0
Ethyl ether	Ave	0.1773	0.1466		8.27	10.0	-17.3	20.0
Acrolein	Ave	0.0267	0.0292		109	100	9.1	20.0
1,1-Dichloroethene	Ave	0.3216	0.2925		9.09	10.0	-9.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.4038	0.3759		9.31	10.0	-6.9	20.0
Acetone	Ave	0.0252	0.0223		35.3	40.0	-11.7	20.0
Iodomethane	Ave	0.7350	0.6562		8.93	10.0	-10.7	20.0
Carbon disulfide	Ave	1.141	1.080		9.46	10.0	-5.4	20.0
3-Chloro-1-propene	Ave	0.5738	0.5326		9.28	10.0	-7.2	20.0
Methyl acetate	Ave	0.0975	0.0785		40.2	50.0	-19.5	20.0
Methylene Chloride	Ave	0.3446	0.3009		8.73	10.0	-12.7	20.0
t-Butyl alcohol	Ave	1.243	1.117		89.8	100	-10.2	20.0
Acrylonitrile	Ave	0.0279	0.0222		79.5	100	-20.5*	20.0
Methyl tert-butyl ether	Ave	0.5438	0.4473		8.23	10.0	-17.7	20.0
trans-1,2-Dichloroethene	Ave	0.3618	0.3417		9.44	10.0	-5.6	20.0
Hexane	Ave	2.291	2.310		10.1	10.0	0.9	20.0
1,1-Dichloroethane	Ave	0.6818	0.5919	0.1000	8.68	10.0	-13.2	20.0
Vinyl acetate	Ave	0.7013	0.6969		19.9	20.0	-0.6	20.0
2-Butanone (MEK)	Ave	0.0483	0.0407		33.8	40.0	-15.6	20.0
cis-1,2-Dichloroethene	Ave	0.3785	0.3317		8.76	10.0	-12.4	20.0
2,2-Dichloropropane	Lin		0.5153		9.95	10.0	-0.5	20.0
sec-Butyl Alcohol	Ave	1.106	1.034		280	300	-6.6	20.0
Bromochloromethane	Ave	0.1752	0.1571		8.96	10.0	-10.4	20.0
Tetrahydrofuran	Ave	0.0359	0.0275		15.3	20.0	-23.6*	20.0
Chloroform	Ave	0.6324	0.5539		8.76	10.0	-12.4	20.0
1,1,1-Trichloroethane	Ave	0.5401	0.5008		9.27	10.0	-7.3	20.0
Cyclohexane	Ave	0.6044	0.5626		9.31	10.0	-6.9	20.0
1,1-Dichloropropene	Ave	0.5342	0.5106		9.56	10.0	-4.4	20.0
Carbon tetrachloride	Ave	0.5107	0.4861		9.52	10.0	-4.8	20.0
Isobutyl alcohol	Ave	0.3751	0.3645		243	250	-2.8	20.0
Benzene	Ave	1.071	0.9847		9.20	10.0	-8.0	20.0
1,2-Dichloroethane	Ave	0.2388	0.2089		8.75	10.0	-12.5	20.0
Trichloroethene	Ave	0.4579	0.4232		9.24	10.0	-7.6	20.0
2-Pentanone	Ave	0.2126	0.1967		37.0	40.0	-7.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: ICV 280-349323/17 Calibration Date: 11/02/2016 15:24

Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22

Lab File ID: H1095.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5172	0.5225		10.1	10.0	1.0	20.0
1,2-Dichloropropane	Ave	0.4127	0.3574		8.66	10.0	-13.4	20.0
Dibromomethane	Ave	0.2149	0.1906		8.87	10.0	-11.3	20.0
1,4-Dioxane	Lin2		0.0011		178	200	-11.1	20.0
Bromodichloromethane	Ave	0.5537	0.4801		8.67	10.0	-13.3	20.0
2-Chloroethyl vinyl ether	Qua		0.1457		8.38	10.0	-16.2	20.0
cis-1,3-Dichloropropene	Ave	2.166	2.081		9.61	10.0	-3.9	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1530	0.1407		36.8	40.0	-8.0	20.0
Toluene	Ave	1.201	1.148		9.56	10.0	-4.4	20.0
trans-1,3-Dichloropropene	Ave	0.3554	0.3156		8.88	10.0	-11.2	20.0
Ethyl methacrylate	Ave	1.266	1.155		9.12	10.0	-8.8	20.0
1,1,2-Trichloroethane	Lin2		0.2170		8.83	10.0	-11.7	20.0
Tetrachloroethene	Ave	1.795	1.929		10.7	10.0	7.5	20.0
1,3-Dichloropropane	Ave	1.648	1.537		9.33	10.0	-6.7	20.0
2-Hexanone	Lin2		0.4250		38.5	40.0	-3.8	20.0
Dibromochloromethane	Ave	1.808	1.726		9.55	10.0	-4.5	20.0
1,2-Dibromoethane	Ave	1.299	1.247		9.61	10.0	-3.9	20.0
1-Chlorohexane	Ave	2.653	2.671		10.1	10.0	0.7	20.0
Chlorobenzene	Ave	3.686	3.673	0.3000	9.97	10.0	-0.3	20.0
1,1,1,2-Tetrachloroethane	Ave	1.774	1.687		9.51	10.0	-4.9	20.0
Ethylbenzene	Ave	1.788	1.834		10.3	10.0	2.5	20.0
m-Xylene & p-Xylene	Ave	2.452	2.542		10.4	10.0	3.7	20.0
o-Xylene	Ave	2.217	2.275		10.3	10.0	2.6	20.0
Styrene	Ave	3.536	3.603		10.2	10.0	1.9	20.0
Bromoform	Ave	1.033	1.013	0.1000	9.80	10.0	-2.0	20.0
Isopropylbenzene	Ave	4.145	4.175		10.1	10.0	0.7	20.0
Cyclohexanone	Ave	0.0175	0.0166		380	400	-5.1	20.0
Bromobenzene	Ave	1.084	1.078		9.94	10.0	-0.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9037	0.8044	0.3000	8.90	10.0	-11.0	20.0
1,2,3-Trichloropropane	Ave	0.2025	0.1736		8.57	10.0	-14.3	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1716	0.1619		9.43	10.0	-5.7	20.0
N-Propylbenzene	Ave	1.019	1.052		10.3	10.0	3.2	20.0
2-Chlorotoluene	Ave	0.8559	0.8431		9.85	10.0	-1.5	20.0
1,3,5-Trimethylbenzene	Ave	2.955	3.024		10.2	10.0	2.4	20.0
4-Chlorotoluene	Ave	1.000	0.9930		9.93	10.0	-0.7	20.0
tert-Butylbenzene	Ave	3.422	3.497		10.2	10.0	2.2	20.0
1,2,4-Trimethylbenzene	Ave	2.864	2.886		10.1	10.0	0.8	20.0
sec-Butylbenzene	Ave	0.8951	0.9233		10.3	10.0	3.2	20.0
1,3-Dichlorobenzene	Ave	1.627	1.713		10.5	10.0	5.3	20.0
4-Isopropyltoluene	Ave	3.750	4.023		10.7	10.0	7.3	20.0
1,4-Dichlorobenzene	Ave	2.220	2.158		9.72	10.0	-2.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: ICV 280-349323/17 Calibration Date: 11/02/2016 15:24
 Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59
 GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 11/02/2016 13:22
 Lab File ID: H1095.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	3.490	3.811		10.9	10.0	9.2	20.0
1,2-Dichlorobenzene	Ave	1.615	1.589		9.84	10.0	-1.6	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.1562		9.09	10.0	-9.1	20.0
1,2,4-Trichlorobenzene	Ave	1.160	1.241		10.7	10.0	7.0	20.0
Hexachlorobutadiene	Ave	1.054	1.185		11.2	10.0	12.4	20.0
Naphthalene	Ave	1.203	1.185		9.85	10.0	-1.5	20.0
1,2,3-Trichlorobenzene	Ave	0.8915	0.9485		10.6	10.0	6.4	20.0
Dibromofluoromethane (Surr)	Ave	0.5859	0.5569		9.51	10.0	-4.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2395	0.2237		9.34	10.0	-6.6	20.0
Toluene-d8 (Surr)	Ave	5.617	5.730		10.2	10.0	2.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.705	1.634		9.58	10.0	-4.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1095.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 02-Nov-2016 15:24:30 ALS Bottle#: 13 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: icv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 03-Nov-2016 07:59:28 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK001

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	4.015	4.019	-0.004	96	205713	250.0	250.0	
* 2 Fluorobenzene	96	6.784	6.805	-0.021	99	1238923	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.138	11.159	-0.021	87	278764	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.134	14.137	-0.003	96	460656	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.948	5.969	-0.021	96	551960	10.0	9.51	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.366	6.387	-0.021	96	221668	10.0	9.34	
\$ 10 Toluene-d8 (Surr)	98	8.909	8.913	-0.004	92	1277760	10.0	10.2	
\$ 11 4-Bromofluorobenzene (Surr	95	12.793	12.796	-0.003	90	602128	10.0	9.58	
28 Dichlorodifluoromethane	85	2.169	2.173	-0.004	98	361249	10.0	9.09	
30 Chloromethane	50	2.273	2.277	-0.004	98	244222	10.0	8.09	
32 Vinyl chloride	62	2.413	2.416	-0.003	98	277866	10.0	9.16	
35 Bromomethane	94	2.691	2.695	-0.004	90	243808	10.0	9.01	
36 Chloroethane	64	2.778	2.782	-0.004	99	185640	10.0	8.86	
37 Dichlorofluoromethane	67	2.953	2.956	-0.003	98	696241	10.0	9.39	
38 Trichlorofluoromethane	101	3.005	3.026	-0.021	100	515848	10.0	10.2	
40 Ethyl ether	59	3.249	3.252	-0.003	95	145303	10.0	8.27	
44 Acrolein	56	3.388	3.392	-0.004	99	288859	100.0	109.1	
45 1,1-Dichloroethene	96	3.510	3.514	-0.004	97	289882	10.0	9.09	
46 1,1,2-Trichloro-1,2,2-trif	151	3.527	3.531	-0.004	97	372588	10.0	9.31	
47 Acetone	43	3.545	3.548	-0.003	99	88370	40.0	35.3	
48 Iodomethane	142	3.667	3.688	-0.021	98	650332	10.0	8.93	
50 Carbon disulfide	76	3.754	3.757	-0.003	99	1070129	10.0	9.46	
53 Methyl acetate	43	3.858	3.862	-0.004	97	389005	50.0	40.2	
52 3-Chloro-1-propene	41	3.858	3.862	-0.004	92	527872	10.0	9.28	
54 Methylene Chloride	84	3.980	3.984	-0.004	98	298236	10.0	8.73	
55 2-Methyl-2-propanol	59	4.085	4.106	-0.021	99	91875	100.0	89.8	
57 Acrylonitrile	53	4.241	4.245	-0.004	99	219614	100.0	79.5	
56 Methyl tert-butyl ether	73	4.276	4.280	-0.004	96	443377	10.0	8.23	
58 trans-1,2-Dichloroethene	96	4.276	4.280	-0.004	99	338665	10.0	9.44	
59 Hexane	57	4.537	4.541	-0.004	92	515165	10.0	10.1	
60 1,1-Dichloroethane	63	4.729	4.733	-0.004	96	586608	10.0	8.68	
61 Vinyl acetate	43	4.746	4.750	-0.004	97	1381411	20.0	19.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
65 cis-1,2-Dichloroethene	96	5.391	5.395	-0.004	84	328751	10.0	8.76	
67 2-Butanone (MEK)	43	5.391	5.395	-0.004	45	161500	40.0	33.8	
66 2,2-Dichloropropane	77	5.408	5.412	-0.004	91	510699	10.0	9.95	
71 sec-Butyl Alcohol	45	5.617	5.621	-0.004	97	255216	300.0	280.3	
73 Chlorobromomethane	128	5.687	5.691	-0.004	97	155655	10.0	8.96	
74 Tetrahydrofuran	42	5.739	5.760	-0.021	91	54421	20.0	15.3	
75 Chloroform	83	5.757	5.760	-0.003	96	548965	10.0	8.76	
76 1,1,1-Trichloroethane	97	6.000	6.022	-0.022	98	496332	10.0	9.27	
77 Cyclohexane	56	6.070	6.091	-0.021	91	557637	10.0	9.31	
78 1,1-Dichloropropene	75	6.192	6.196	-0.004	98	506031	10.0	9.56	
79 Carbon tetrachloride	117	6.209	6.213	-0.004	98	481750	10.0	9.52	
80 Isobutyl alcohol	41	6.314	6.335	-0.021	93	74980	250.0	242.9	
81 Benzene	78	6.453	6.457	-0.004	96	975921	10.0	9.20	
82 1,2-Dichloroethane	62	6.471	6.474	-0.003	94	207062	10.0	8.75	
84 n-Heptane	43	6.749	6.753	-0.004	93	656570	10.0	10.3	
86 Trichloroethene	95	7.254	7.275	-0.021	98	419416	10.0	9.24	
88 2-Pentanone	43	7.498	7.502	-0.004	98	779948	40.0	37.0	
89 Methylcyclohexane	55	7.516	7.537	-0.021	93	517880	10.0	10.1	
90 1,2-Dichloropropane	63	7.568	7.572	-0.004	96	354271	10.0	8.66	
92 Dibromomethane	93	7.725	7.728	-0.003	97	188896	10.0	8.87	
93 1,4-Dioxane	88	7.759	7.746	0.013	87	21821	200.0	177.8	
94 Dichlorobromomethane	83	7.916	7.937	-0.021	99	475846	10.0	8.67	
96 2-Chloroethyl vinyl ether	63	8.317	8.338	-0.021	91	144383	10.0	8.38	
97 cis-1,3-Dichloropropene	75	8.526	8.547	-0.021	97	464088	10.0	9.61	
98 4-Methyl-2-pentanone (MIBK)	43	8.752	8.756	-0.004	96	557909	40.0	36.8	
99 Toluene	91	8.996	9.017	-0.021	99	1137714	10.0	9.56	
100 trans-1,3-Dichloropropene	75	9.309	9.331	-0.022	93	312776	10.0	8.88	
101 Ethyl methacrylate	69	9.431	9.452	-0.021	88	257600	10.0	9.12	
102 1,1,2-Trichloroethane	97	9.571	9.592	-0.021	89	215069	10.0	8.83	
103 Tetrachloroethene	164	9.797	9.801	-0.004	98	430291	10.0	10.7	
104 1,3-Dichloropropane	76	9.814	9.836	-0.022	93	342805	10.0	9.33	
105 2-Hexanone	43	9.954	9.975	-0.021	94	379111	40.0	38.5	
108 Chlorodibromomethane	129	10.180	10.201	-0.021	90	384881	10.0	9.55	
109 Ethylene Dibromide	107	10.372	10.376	-0.004	98	278191	10.0	9.61	
110 1-Chlorohexane	91	11.138	11.159	-0.021	95	595623	10.0	10.1	
111 Chlorobenzene	112	11.173	11.194	-0.021	94	819122	10.0	9.97	
112 1,1,1,2-Tetrachloroethane	131	11.312	11.333	-0.021	98	376232	10.0	9.51	
113 Ethylbenzene	106	11.347	11.368	-0.021	98	408962	10.0	10.3	
114 m-Xylene & p-Xylene	106	11.539	11.542	-0.003	100	566996	10.0	10.4	
115 o-Xylene	106	12.096	12.117	-0.021	96	507293	10.0	10.3	
116 Styrene	104	12.131	12.135	-0.004	95	803485	10.0	10.2	
117 Bromoform	173	12.375	12.396	-0.021	97	225816	10.0	9.80	
118 Isopropylbenzene	105	12.601	12.605	-0.004	95	1538672	10.0	10.1	
120 Cyclohexanone	55	12.723	12.744	-0.021	89	148052	400.0	379.6	
122 Bromobenzene	156	12.967	12.988	-0.021	95	397184	10.0	9.94	
121 1,1,2,2-Tetrachloroethane	83	12.984	12.988	-0.004	94	296423	10.0	8.90	
123 1,2,3-Trichloropropane	110	13.019	13.040	-0.021	79	63982	10.0	8.57	
124 trans-1,4-Dichloro-2-buten	53	13.054	13.058	-0.004	70	59656	10.0	9.43	
125 N-Propylbenzene	120	13.106	13.110	-0.004	99	387562	10.0	10.3	
126 2-Chlorotoluene	126	13.211	13.214	-0.003	96	310716	10.0	9.85	
127 1,3,5-Trimethylbenzene	105	13.315	13.336	-0.021	96	1114566	10.0	10.2	
128 4-Chlorotoluene	126	13.332	13.354	-0.022	98	365926	10.0	9.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.698	13.702	-0.004	94	1288812	10.0	10.2	
130 1,2,4-Trimethylbenzene	105	13.750	13.754	-0.004	96	1063640	10.0	10.1	
131 sec-Butylbenzene	134	13.942	13.946	-0.004	93	340250	10.0	10.3	
132 1,3-Dichlorobenzene	146	14.064	14.068	-0.004	97	631391	10.0	10.5	
133 4-Isopropyltoluene	119	14.099	14.103	-0.004	98	1482624	10.0	10.7	
134 1,4-Dichlorobenzene	146	14.151	14.172	-0.021	95	795437	10.0	9.72	
137 n-Butylbenzene	91	14.517	14.538	-0.021	97	1404478	10.0	10.9	
138 1,2-Dichlorobenzene	146	14.552	14.555	-0.003	97	585633	10.0	9.84	
139 1,2-Dibromo-3-Chloropropan	157	15.335	15.339	-0.004	93	57554	10.0	9.09	
141 1,2,4-Trichlorobenzene	180	16.102	16.105	-0.003	94	457364	10.0	10.7	
142 Hexachlorobutadiene	225	16.241	16.262	-0.021	97	436746	10.0	11.2	
143 Naphthalene	128	16.328	16.332	-0.004	97	436783	10.0	9.85	
144 1,2,3-Trichlorobenzene	180	16.554	16.558	-0.004	96	349562	10.0	10.6	
S 151 1,2-Dichloroethene, Total	96				0		20.0	18.2	
S 149 1,2-Dichloroethene, Total	1				0		10.0	18.2	
S 150 Xylenes, Total	106				0		20.0	20.6	
S 148 1,3-Dichloropropene, Total	1				0		20.0	18.5	
S 145 Trihalomethanes, Total	1				0		40.0	36.8	
S 146 Xylenes, Total (URS)	1				0		20.0	20.6	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main B_00016	Amount Added: 5.00	Units: uL
MV-Gas/Ket B_00030	Amount Added: 5.00	Units: uL
MV-SS 2-Cleve_00029	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1095.D

Injection Date: 02-Nov-2016 15:24:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: icv

Worklist Smp#: 17

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

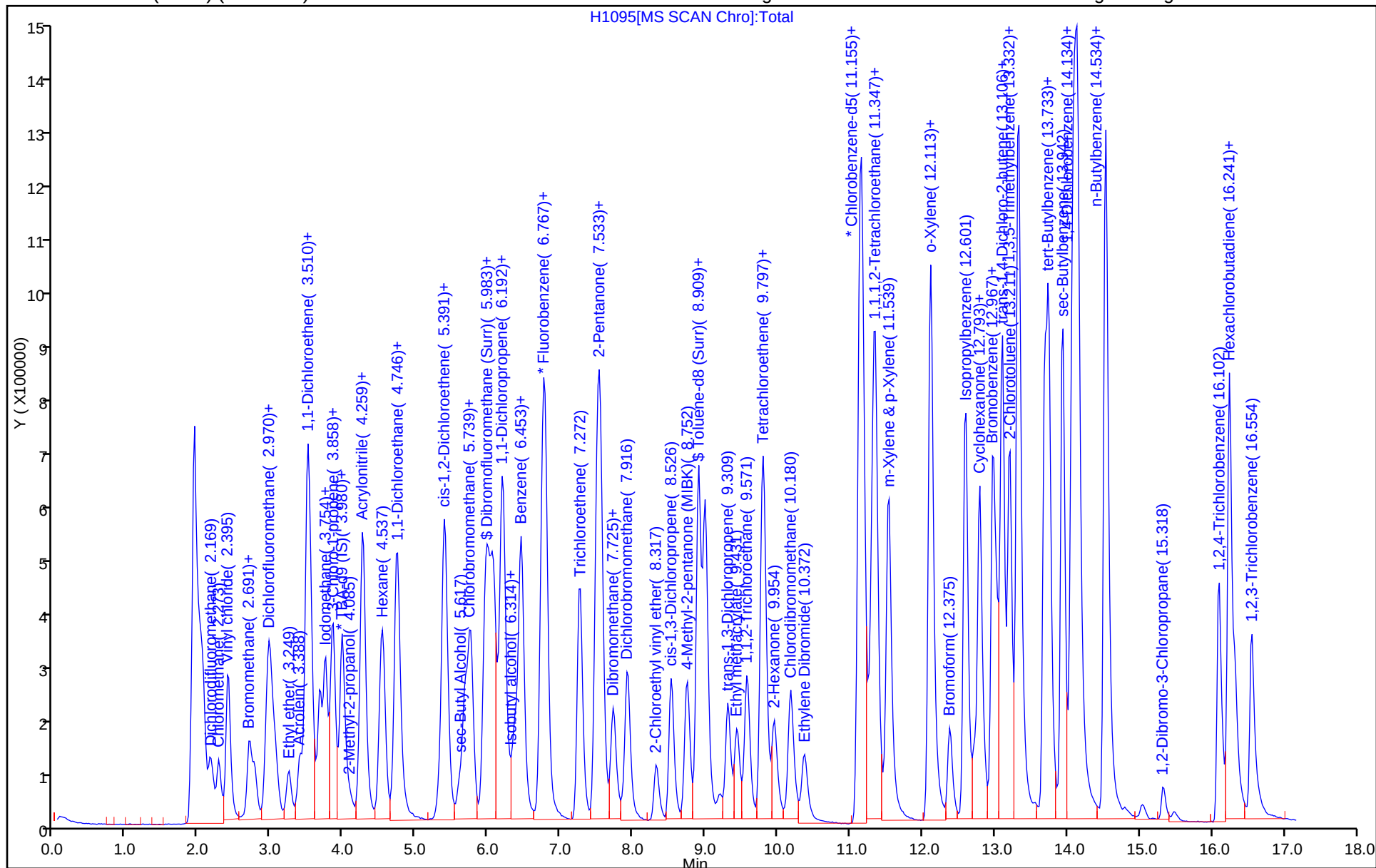
ALS Bottle#: 13

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCV 280-350526/2 Calibration Date: 11/09/2016 07:04

Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22

Lab File ID: H1442.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.4305		10.7	10.0	6.9	20.0
Chloromethane	Lin1		0.2535	0.1000	8.32	10.0	-16.8	20.0
Vinyl chloride	Ave	0.3061	0.2960		9.67	10.0	-3.3	20.0
Bromomethane	Ave	0.2731	0.2792		10.2	10.0	2.3	20.0
Chloroethane	Ave	0.2113	0.1981		9.38	10.0	-6.2	20.0
Dichlorofluoromethane	Ave	0.7483	0.7501		10.0	10.0	0.2	20.0
Trichlorofluoromethane	Ave	0.5124	0.6005		11.7	10.0	17.2	20.0
Ethyl ether	Ave	0.1773	0.1648		9.29	10.0	-7.1	20.0
Acrolein	Ave	0.0267	0.0258		96.6	100	-3.4	20.0
1,1-Dichloroethene	Ave	0.3216	0.3483		10.8	10.0	8.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.4038	0.4654		11.5	10.0	15.3	20.0
Acetone	Ave	0.0252	0.0241		38.2	40.0	-4.5	20.0
Iodomethane	Ave	0.7350	0.8171		11.1	10.0	11.2	20.0
Carbon disulfide	Ave	1.141	1.237		10.8	10.0	8.4	20.0
3-Chloro-1-propene	Ave	0.5738	0.5323		9.28	10.0	-7.2	20.0
Methyl acetate	Ave	0.0975	0.0880		45.1	50.0	-9.7	20.0
Methylene Chloride	Ave	0.3446	0.3648		10.6	10.0	5.9	20.0
t-Butyl alcohol	Ave	1.243	1.149		92.4	100	-7.6	20.0
Acrylonitrile	Ave	0.0279	0.0257		92.3	100	-7.7	20.0
Methyl tert-butyl ether	Ave	0.5438	0.5536		10.2	10.0	1.8	20.0
trans-1,2-Dichloroethene	Ave	0.3618	0.3920		10.8	10.0	8.3	20.0
Hexane	Ave	2.291	2.295		10.0	10.0	0.2	20.0
1,1-Dichloroethane	Ave	0.6818	0.6721	0.1000	9.86	10.0	-1.4	20.0
Vinyl acetate	Ave	0.7013	0.7422		21.2	20.0	5.8	20.0
2-Butanone (MEK)	Ave	0.0483	0.0443		36.7	40.0	-8.2	20.0
cis-1,2-Dichloroethene	Ave	0.3785	0.4019		10.6	10.0	6.2	20.0
2,2-Dichloropropane	Lin		0.6077		11.9	10.0	19.1	20.0
sec-Butyl Alcohol	Ave	1.106	0.9570		130	150	-13.5	20.0
Bromochloromethane	Ave	0.1752	0.1991		11.4	10.0	13.6	20.0
Tetrahydrofuran	Ave	0.0359	0.0305		17.0	20.0	-15.2	20.0
Chloroform	Ave	0.6324	0.6633		10.5	10.0	4.9	20.0
1,1,1-Trichloroethane	Ave	0.5401	0.6124		11.3	10.0	13.4	20.0
Cyclohexane	Ave	0.6044	0.6162		10.2	10.0	1.9	20.0
1,1-Dichloropropene	Ave	0.5342	0.5788		10.8	10.0	8.3	20.0
Carbon tetrachloride	Ave	0.5107	0.6092		11.9	10.0	19.3	20.0
Isobutyl alcohol	Ave	0.3751	0.3534		236	250	-5.8	20.0
Benzene	Ave	1.071	1.115		10.4	10.0	4.1	20.0
1,2-Dichloroethane	Ave	0.2388	0.2585		10.8	10.0	8.3	20.0
Trichloroethene	Ave	0.4579	0.4953		10.8	10.0	8.2	20.0
2-Pentanone	Ave	0.2126	0.2382		22.4	20.0	12.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCV 280-350526/2 Calibration Date: 11/09/2016 07:04

Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22

Lab File ID: H1442.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5172	0.5731		11.1	10.0	10.8	20.0
1,2-Dichloropropane	Ave	0.4127	0.3896		9.44	10.0	-5.6	20.0
Dibromomethane	Ave	0.2149	0.2303		10.7	10.0	7.1	20.0
1,4-Dioxane	Lin2		0.0012		188	200	-5.8	20.0
Bromodichloromethane	Ave	0.5537	0.5848		10.6	10.0	5.6	20.0
2-Chloroethyl vinyl ether	Qua		0.1004		6.07	10.0	-39.3*	20.0
cis-1,3-Dichloropropene	Ave	2.166	2.153		9.94	10.0	-0.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1530	0.1550		40.5	40.0	1.3	20.0
Toluene	Ave	1.201	1.323		11.0	10.0	10.2	20.0
trans-1,3-Dichloropropene	Ave	0.3554	0.3839		10.8	10.0	8.0	20.0
Ethyl methacrylate	Ave	1.266	1.191		9.41	10.0	-5.9	20.0
1,1,2-Trichloroethane	Lin2		0.2731		11.1	10.0	11.5	20.0
Tetrachloroethene	Ave	1.795	2.084		11.6	10.0	16.1	20.0
1,3-Dichloropropane	Ave	1.648	1.597		9.69	10.0	-3.1	20.0
2-Hexanone	Lin2		0.3979		36.1	40.0	-9.9	20.0
Dibromochloromethane	Ave	1.808	1.834		10.1	10.0	1.5	20.0
1,2-Dibromoethane	Ave	1.299	1.351		10.4	10.0	4.1	20.0
1-Chlorohexane	Ave	2.653	2.708		5.10	5.00	2.1	20.0
Chlorobenzene	Ave	3.686	3.891	0.3000	10.6	10.0	5.6	20.0
1,1,1,2-Tetrachloroethane	Ave	1.774	1.846		10.4	10.0	4.1	20.0
Ethylbenzene	Ave	1.788	1.878		10.5	10.0	5.0	20.0
m-Xylene & p-Xylene	Ave	2.452	2.624		10.7	10.0	7.0	20.0
o-Xylene	Ave	2.217	2.370		10.7	10.0	6.9	20.0
Styrene	Ave	3.536	3.719		10.5	10.0	5.2	20.0
Bromoform	Ave	1.033	1.131	0.1000	10.9	10.0	9.5	20.0
Isopropylbenzene	Ave	4.145	4.148		10.0	10.0	0.0	20.0
Cyclohexanone	Ave	0.0175	0.0164		375	400	-6.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9037	0.7829	0.3000	8.66	10.0	-13.4	20.0
Bromobenzene	Ave	1.084	1.124		10.4	10.0	3.7	20.0
1,2,3-Trichloropropane	Ave	0.2025	0.1835		9.06	10.0	-9.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1716	0.1482		8.64	10.0	-13.6	20.0
N-Propylbenzene	Ave	1.019	1.044		10.2	10.0	2.5	20.0
2-Chlorotoluene	Ave	0.8559	0.8739		10.2	10.0	2.1	20.0
1,3,5-Trimethylbenzene	Ave	2.955	3.016		10.2	10.0	2.1	20.0
4-Chlorotoluene	Ave	1.000	0.996		9.96	10.0	-0.4	20.0
tert-Butylbenzene	Ave	3.422	3.479		10.2	10.0	1.7	20.0
1,2,4-Trimethylbenzene	Ave	2.864	2.897		10.1	10.0	1.1	20.0
sec-Butylbenzene	Ave	0.8951	0.9297		10.4	10.0	3.9	20.0
1,3-Dichlorobenzene	Ave	1.627	1.600		9.83	10.0	-1.7	20.0
4-Isopropyltoluene	Ave	3.750	3.937		10.5	10.0	5.0	20.0
1,4-Dichlorobenzene	Ave	2.220	2.344		10.6	10.0	5.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: CCV 280-350526/2 Calibration Date: 11/09/2016 07:04
 Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22
 Lab File ID: H1442.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	3.490	3.604		10.3	10.0	3.3	20.0
1,2-Dichlorobenzene	Ave	1.615	1.655		10.3	10.0	2.5	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.1648		9.59	10.0	-4.1	20.0
1,2,4-Trichlorobenzene	Ave	1.160	1.276		11.0	10.0	10.0	20.0
Hexachlorobutadiene	Ave	1.054	1.200		11.4	10.0	13.9	20.0
Naphthalene	Ave	1.203	1.169		9.72	10.0	-2.8	20.0
1,2,3-Trichlorobenzene	Ave	0.8915	0.9764		11.0	10.0	9.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1442.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Nov-2016 07:04:30 ALS Bottle#: 1 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub52
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:36 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 07:26:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.980	3.980	0.000	96	235451	250.0	250.0	
* 2 Fluorobenzene	96	6.749	6.749	0.000	99	1236087	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.086	11.086	0.000	86	311123	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.099	14.099	0.000	96	532812	12.5	12.5	
28 Dichlorodifluoromethane	85	2.152	2.152	0.000	99	425725	10.0	10.7	
30 Chloromethane	50	2.256	2.256	0.000	98	250715	10.0	8.32	
32 Vinyl chloride	62	2.396	2.396	0.000	98	292735	10.0	9.67	
35 Bromomethane	94	2.674	2.674	0.000	90	276121	10.0	10.2	
36 Chloroethane	64	2.761	2.761	0.000	99	195931	10.0	9.38	
37 Dichlorofluoromethane	67	2.935	2.935	0.000	99	741729	10.0	10.0	
38 Trichlorofluoromethane	101	2.988	2.988	0.000	100	593833	10.0	11.7	
40 Ethyl ether	59	3.214	3.214	0.000	94	162981	10.0	9.29	
44 Acrolein	56	3.371	3.371	0.000	99	255131	100.0	96.6	
45 1,1-Dichloroethene	96	3.475	3.475	0.000	99	344465	10.0	10.8	
46 1,1,2-Trichloro-1,2,2-trif	151	3.493	3.493	0.000	97	460215	10.0	11.5	
47 Acetone	43	3.510	3.510	0.000	99	95292	40.0	38.2	
48 Iodomethane	142	3.649	3.649	0.000	98	808047	10.0	11.1	
50 Carbon disulfide	76	3.719	3.719	0.000	99	1223302	10.0	10.8	
53 Methyl acetate	43	3.824	3.824	0.000	96	435311	50.0	45.1	
52 3-Chloro-1-propene	41	3.824	3.824	0.000	90	526380	10.0	9.28	
54 Methylene Chloride	84	3.946	3.946	0.000	96	360689	10.0	10.6	
55 2-Methyl-2-propanol	59	4.067	4.067	0.000	98	108226	100.0	92.4	
57 Acrylonitrile	53	4.207	4.207	0.000	98	254227	100.0	92.3	
56 Methyl tert-butyl ether	73	4.242	4.242	0.000	96	547450	10.0	10.2	
58 trans-1,2-Dichloroethene	96	4.242	4.242	0.000	99	387598	10.0	10.8	
59 Hexane	57	4.503	4.503	0.000	92	571335	10.0	10.0	
60 1,1-Dichloroethane	63	4.694	4.694	0.000	96	664611	10.0	9.86	
61 Vinyl acetate	43	4.712	4.712	0.000	97	1467899	20.0	21.2	
67 2-Butanone (MEK)	43	5.356	5.356	0.000	99	175376	40.0	36.7	
65 cis-1,2-Dichloroethene	96	5.356	5.356	0.000	83	397395	10.0	10.6	
66 2,2-Dichloropropane	77	5.374	5.374	0.000	90	600922	10.0	11.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
71 sec-Butyl Alcohol	45	5.583	5.583	0.000	95	135195	150.0	129.7	
73 Chlorobromomethane	128	5.652	5.652	0.000	93	196833	10.0	11.4	
74 Tetrahydrofuran	42	5.705	5.705	0.000	89	60285	20.0	17.0	
75 Chloroform	83	5.722	5.722	0.000	95	655889	10.0	10.5	
76 1,1,1-Trichloroethane	97	5.966	5.966	0.000	98	605620	10.0	11.3	
77 Cyclohexane	56	6.035	6.035	0.000	89	609337	10.0	10.2	
78 1,1-Dichloropropene	75	6.157	6.157	0.000	98	572325	10.0	10.8	
79 Carbon tetrachloride	117	6.175	6.175	0.000	98	602396	10.0	11.9	
80 Isobutyl alcohol	41	6.279	6.279	0.000	95	83217	250.0	235.5	
81 Benzene	78	6.419	6.419	0.000	97	1102256	10.0	10.4	
82 1,2-Dichloroethane	62	6.436	6.436	0.000	96	255655	10.0	10.8	
84 n-Heptane	43	6.715	6.715	0.000	92	688096	10.0	10.9	
86 Trichloroethene	95	7.220	7.220	0.000	97	489781	10.0	10.8	
88 2-Pentanone	43	7.446	7.446	0.000	98	471084	20.0	22.4	
89 Methylcyclohexane	55	7.481	7.481	0.000	91	566669	10.0	11.1	
90 1,2-Dichloropropane	63	7.516	7.516	0.000	92	385266	10.0	9.44	
92 Dibromomethane	93	7.690	7.690	0.000	95	227690	10.0	10.7	
93 1,4-Dioxane	88	7.707	7.707	0.000	30	23151	200.0	188.3	
94 Dichlorobromomethane	83	7.882	7.882	0.000	99	578302	10.0	10.6	
96 2-Chloroethyl vinyl ether	63	8.282	8.282	0.000	92	99278	10.0	6.07	
97 cis-1,3-Dichloropropene	75	8.491	8.491	0.000	97	536000	10.0	9.94	
98 4-Methyl-2-pentanone (MIBK)	43	8.700	8.700	0.000	96	612893	40.0	40.5	
99 Toluene	91	8.961	8.961	0.000	99	1308384	10.0	11.0	
100 trans-1,3-Dichloropropene	75	9.257	9.257	0.000	92	379657	10.0	10.8	
101 Ethyl methacrylate	69	9.397	9.397	0.000	88	296524	10.0	9.41	
102 1,1,2-Trichloroethane	97	9.536	9.536	0.000	90	270014	10.0	11.1	
103 Tetrachloroethene	164	9.745	9.745	0.000	97	518704	10.0	11.6	
104 1,3-Dichloropropane	76	9.780	9.780	0.000	87	397526	10.0	9.69	
105 2-Hexanone	43	9.902	9.902	0.000	95	396187	40.0	36.1	
108 Chlorodibromomethane	129	10.128	10.128	0.000	90	456587	10.0	10.1	
109 Ethylene Dibromide	107	10.320	10.320	0.000	98	336322	10.0	10.4	
110 1-Chlorohexane	91	11.086	11.086	0.000	93	336949	5.00	5.10	
111 Chlorobenzene	112	11.138	11.138	0.000	95	968529	10.0	10.6	
112 1,1,1,2-Tetrachloroethane	131	11.260	11.260	0.000	98	459542	10.0	10.4	
113 Ethylbenzene	106	11.295	11.295	0.000	98	467493	10.0	10.5	
114 m-Xylene & p-Xylene	106	11.487	11.487	0.000	100	653044	10.0	10.7	
115 o-Xylene	106	12.061	12.061	0.000	96	589808	10.0	10.7	
116 Styrene	104	12.079	12.079	0.000	94	925733	10.0	10.5	
117 Bromoform	173	12.340	12.340	0.000	97	281417	10.0	10.9	
118 Isopropylbenzene	105	12.549	12.549	0.000	95	1768207	10.0	10.0	
120 Cyclohexanone	55	12.688	12.688	0.000	88	163222	400.0	374.9	
122 Bromobenzene	156	12.932	12.932	0.000	92	479075	10.0	10.4	
121 1,1,2,2-Tetrachloroethane	83	12.932	12.932	0.000	93	333702	10.0	8.66	
123 1,2,3-Trichloropropane	110	12.984	12.984	0.000	79	78213	10.0	9.06	
124 trans-1,4-Dichloro-2-buten	53	13.002	13.002	0.000	74	63184	10.0	8.64	
125 N-Propylbenzene	120	13.071	13.071	0.000	98	445101	10.0	10.2	
126 2-Chlorotoluene	126	13.159	13.159	0.000	97	372480	10.0	10.2	
127 1,3,5-Trimethylbenzene	105	13.280	13.280	0.000	96	1285379	10.0	10.2	
128 4-Chlorotoluene	126	13.298	13.298	0.000	98	424417	10.0	9.96	
129 tert-Butylbenzene	119	13.646	13.646	0.000	94	1483093	10.0	10.2	
130 1,2,4-Trimethylbenzene	105	13.716	13.716	0.000	96	1234726	10.0	10.1	
131 sec-Butylbenzene	134	13.890	13.890	0.000	94	396288	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
132 1,3-Dichlorobenzene	146	14.012	14.012	0.000	98	681790	10.0	9.83	
133 4-Isopropyltoluene	119	14.064	14.064	0.000	98	1677936	10.0	10.5	
134 1,4-Dichlorobenzene	146	14.116	14.116	0.000	94	999164	10.0	10.6	
137 n-Butylbenzene	91	14.482	14.482	0.000	97	1536095	10.0	10.3	
138 1,2-Dichlorobenzene	146	14.500	14.500	0.000	97	705540	10.0	10.3	
139 1,2-Dibromo-3-Chloropropan	157	15.283	15.283	0.000	93	70246	10.0	9.59	
141 1,2,4-Trichlorobenzene	180	16.050	16.050	0.000	94	543701	10.0	11.0	
142 Hexachlorobutadiene	225	16.206	16.206	0.000	97	511480	10.0	11.4	
143 Naphthalene	128	16.276	16.276	0.000	97	498191	10.0	9.72	
144 1,2,3-Trichlorobenzene	180	16.502	16.502	0.000	96	416174	10.0	11.0	
S 151 1,2-Dichloroethene, Total	96				0		20.0	21.4	
S 149 1,2-Dichloroethene, Total	1				0		20.0	21.4	
S 150 Xylenes, Total	106				0		20.0	21.4	
S 148 1,3-Dichloropropene, Total	1				0		20.0	20.7	
S 145 Trihalomethanes, Total	1				0		40.0	42.1	
S 146 Xylenes, Total (URS)	1				0		20.0	21.4	

Reagents:

MV-568718-D_00006	Amount Added: 1.00	Units: uL
MV-Main A_00027	Amount Added: 5.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1442.D

Injection Date: 09-Nov-2016 07:04:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

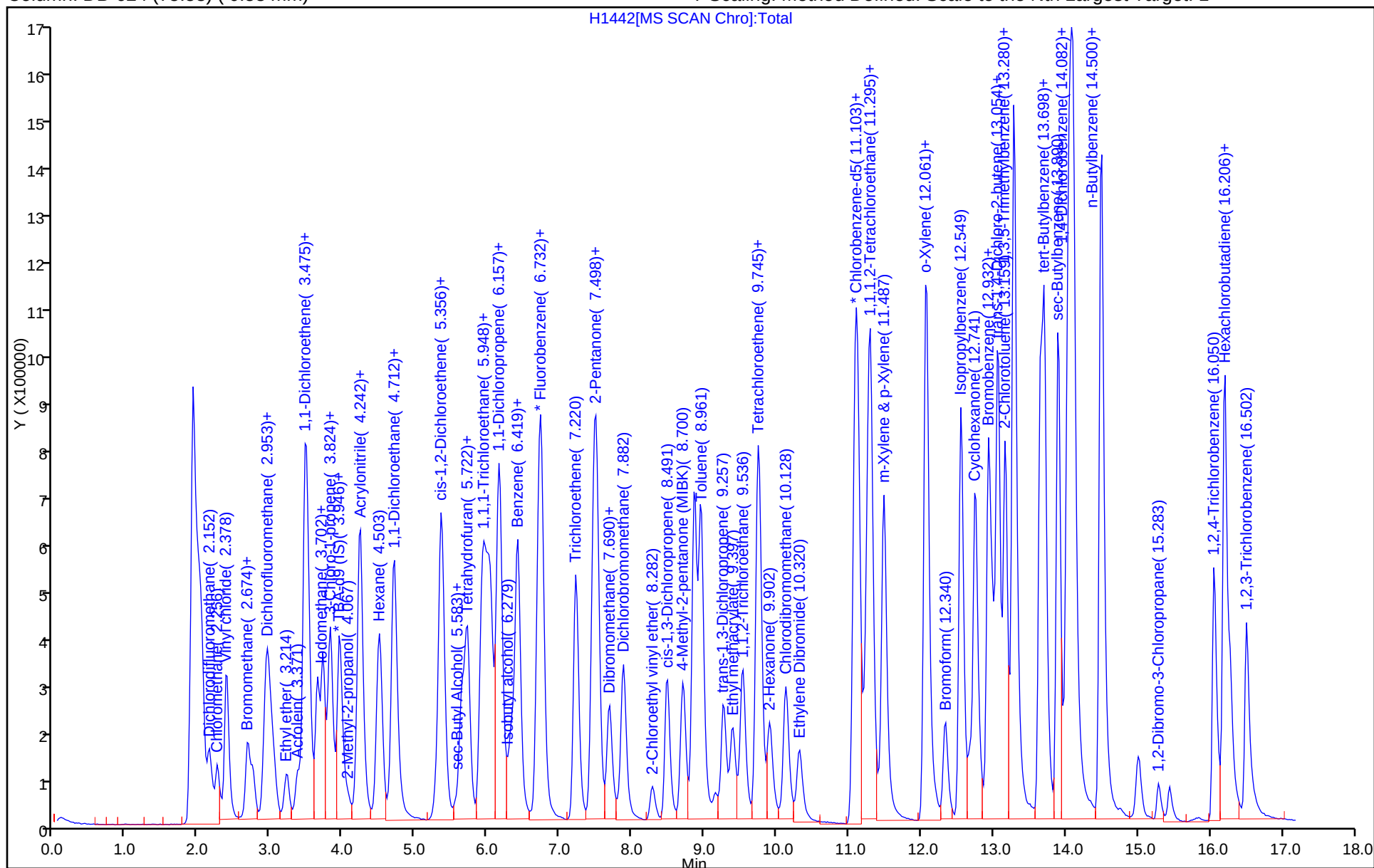
ALS Bottle#: 1

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: CCV 280-350526/3 Calibration Date: 11/09/2016 07:28
Instrument ID: VMS_H Calib Start Date: 07/21/2016 23:31
GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 07/22/2016 01:26
Lab File ID: H1443.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropyl alcohol	Ave	0.0045			32.0	100		

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1443.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Nov-2016 07:28:30 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:41 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 11:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.979	3.979	0.000	96	229961	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.748	0.000	99	1233730	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.084	11.084	0.000	86	333747	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.097	14.097	0.000	94	563343	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.929	5.929	0.000	94	623833	9.75	10.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.347	6.347	0.000	97	232625	9.75	9.84	
\$ 10 Toluene-d8 (Surr)	98	8.855	8.855	0.000	92	1329994	9.75	8.87	
\$ 11 4-Bromofluorobenzene (Surr	95	12.756	12.756	0.000	92	708910	9.75	9.23	
34 Ethylene oxide	43	2.655	2.655	0.000	99	441487	1000.0	876.7	
39 Ethanol	45	3.177	3.177	0.000	92	27985	400.0	347.9	
43 Propene oxide	58	3.317	3.317	0.000	96	2301941	1000.0	1004.7	
49 Isopropyl alcohol	45		3.527				ND	ND	
51 Acetonitrile	41	3.822	3.822	0.000	100	60962	100.0	90.1	
62 Isopropyl ether	87	4.745	4.745	0.000	97	304663	10.0	10.9	
63 2-Chloro-1,3-butadiene	53	4.797	4.797	0.000	88	503940	10.0	10.0	
64 Tert-butyl ethyl ether	59	5.163	5.163	0.000	98	975894	10.0	10.9	
69 Ethyl acetate	43	5.407	5.407	0.000	99	265253	20.0	19.3	
70 Propionitrile	54	5.459	5.459	0.000	97	92744	100.0	101.9	
72 Methacrylonitrile	41	5.616	5.616	0.000	92	601327	100.0	88.1	
83 Tert-amyl methyl ether	73	6.539	6.539	0.000	98	817754	10.0	11.8	
85 n-Butanol	56	7.148	7.148	0.000	83	62741	250.0	254.2	
91 Methyl methacrylate	100	7.653	7.653	0.000	89	119863	20.0	20.3	
95 2-Nitropropane	41	8.193	8.193	0.000	98	49426	20.0	19.2	
107 Tetrahydrothiophene	60	10.109	10.109	0.000	42	5048	20.0	5.88	
119 cis-1,4-Dichloro-2-butene	53	12.652	12.652	0.000	92	121749	20.0	19.0	
135 1,2,3-Trimethylbenzene	105	14.167	14.167	0.000	96	1220277	10.0	9.65	
140 1,3,5-Trichlorobenzene	180	15.491	15.491	0.000	98	759293	10.0	10.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 5.00	Units: uL	
MV-568718-D_00006	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.78	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1443.D

Injection Date: 09-Nov-2016 07:28:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

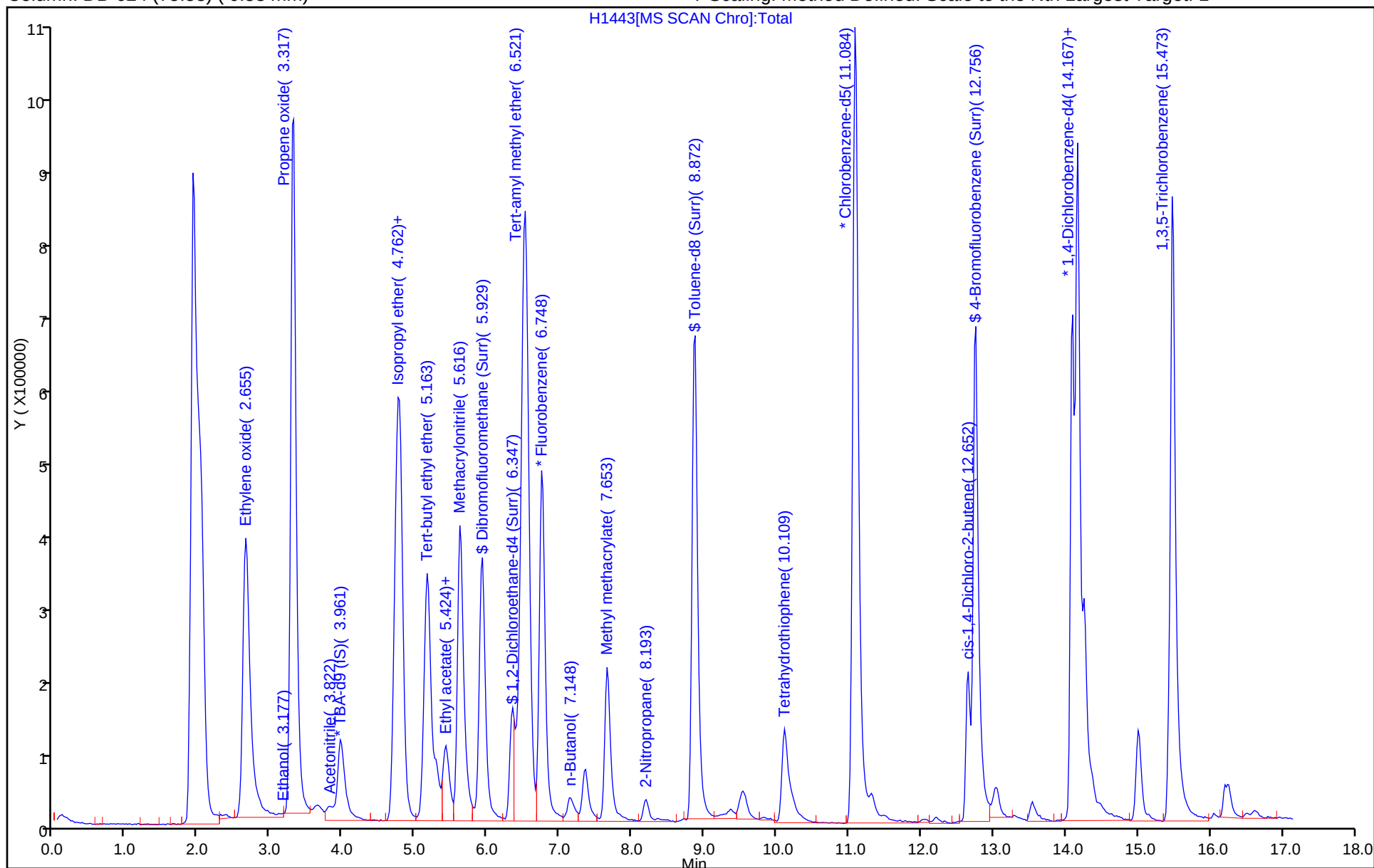
ALS Bottle#: 2

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: CCV 280-350526/3 Calibration Date: 11/09/2016 07:28
 Instrument ID: VMS_H Calib Start Date: 10/08/2016 01:33
 GC Column: DB-624 (75.53) ID: 0.53(mm) Calib End Date: 10/08/2016 03:30
 Lab File ID: H1443.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.0008	0.0007		348	400	-13.0	20.0
Acetonitrile	Lin1		0.0062		90.1	100	-9.9	20.0
Isopropyl ether	Ave	0.2840	0.3087		10.9	10.0	8.7	20.0
2-Chloro-1,3-butadiene	Ave	0.5098	0.5106		10.0	10.0	0.2	20.0
Tert-butyl ethyl ether	Ave	0.9049	0.9888		10.9	10.0	9.3	20.0
Ethyl acetate	Ave	0.1394	0.1344		19.3	20.0	-3.6	20.0
Propionitrile	Ave	0.0092	0.0094		102	100	1.9	20.0
Methacrylonitrile	Ave	0.0692	0.0609		88.1	100	-11.9	20.0
Tert-amyl methyl ether	Ave	0.7025	0.8285		11.8	10.0	17.9	20.0
n-Butanol	Lin2		0.0025		254	250	1.7	20.0
Methyl methacrylate	Ave	0.0597	0.0607		20.3	20.0	1.7	20.0
2-Nitropropane	Ave	0.0261	0.0250		19.2	20.0	-4.0	20.0
cis-1,4-Dichloro-2-butene	Ave	0.1425	0.1351		19.0	20.0	-5.2	20.0
1,2,3-Trimethylbenzene	Ave	2.806	2.708		9.65	10.0	-3.5	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1443.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Nov-2016 07:28:30 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:41 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 11:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.979	3.979	0.000	96	229961	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.748	0.000	99	1233730	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.084	11.084	0.000	86	333747	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.097	14.097	0.000	94	563343	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.929	5.929	0.000	94	623833	9.75	10.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.347	6.347	0.000	97	232625	9.75	9.84	
\$ 10 Toluene-d8 (Surr)	98	8.855	8.855	0.000	92	1329994	9.75	8.87	
\$ 11 4-Bromofluorobenzene (Surr	95	12.756	12.756	0.000	92	708910	9.75	9.23	
34 Ethylene oxide	43	2.655	2.655	0.000	99	441487	1000.0	876.7	
39 Ethanol	45	3.177	3.177	0.000	92	27985	400.0	347.9	
43 Propene oxide	58	3.317	3.317	0.000	96	2301941	1000.0	1004.7	
49 Isopropyl alcohol	45		3.527				ND	ND	
51 Acetonitrile	41	3.822	3.822	0.000	100	60962	100.0	90.1	
62 Isopropyl ether	87	4.745	4.745	0.000	97	304663	10.0	10.9	
63 2-Chloro-1,3-butadiene	53	4.797	4.797	0.000	88	503940	10.0	10.0	
64 Tert-butyl ethyl ether	59	5.163	5.163	0.000	98	975894	10.0	10.9	
69 Ethyl acetate	43	5.407	5.407	0.000	99	265253	20.0	19.3	
70 Propionitrile	54	5.459	5.459	0.000	97	92744	100.0	101.9	
72 Methacrylonitrile	41	5.616	5.616	0.000	92	601327	100.0	88.1	
83 Tert-amyl methyl ether	73	6.539	6.539	0.000	98	817754	10.0	11.8	
85 n-Butanol	56	7.148	7.148	0.000	83	62741	250.0	254.2	
91 Methyl methacrylate	100	7.653	7.653	0.000	89	119863	20.0	20.3	
95 2-Nitropropane	41	8.193	8.193	0.000	98	49426	20.0	19.2	
107 Tetrahydrothiophene	60	10.109	10.109	0.000	42	5048	20.0	5.88	
119 cis-1,4-Dichloro-2-butene	53	12.652	12.652	0.000	92	121749	20.0	19.0	
135 1,2,3-Trimethylbenzene	105	14.167	14.167	0.000	96	1220277	10.0	9.65	
140 1,3,5-Trichlorobenzene	180	15.491	15.491	0.000	98	759293	10.0	10.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 5.00	Units: uL	
MV-568718-D_00006	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.78	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1443.D

Injection Date: 09-Nov-2016 07:28:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

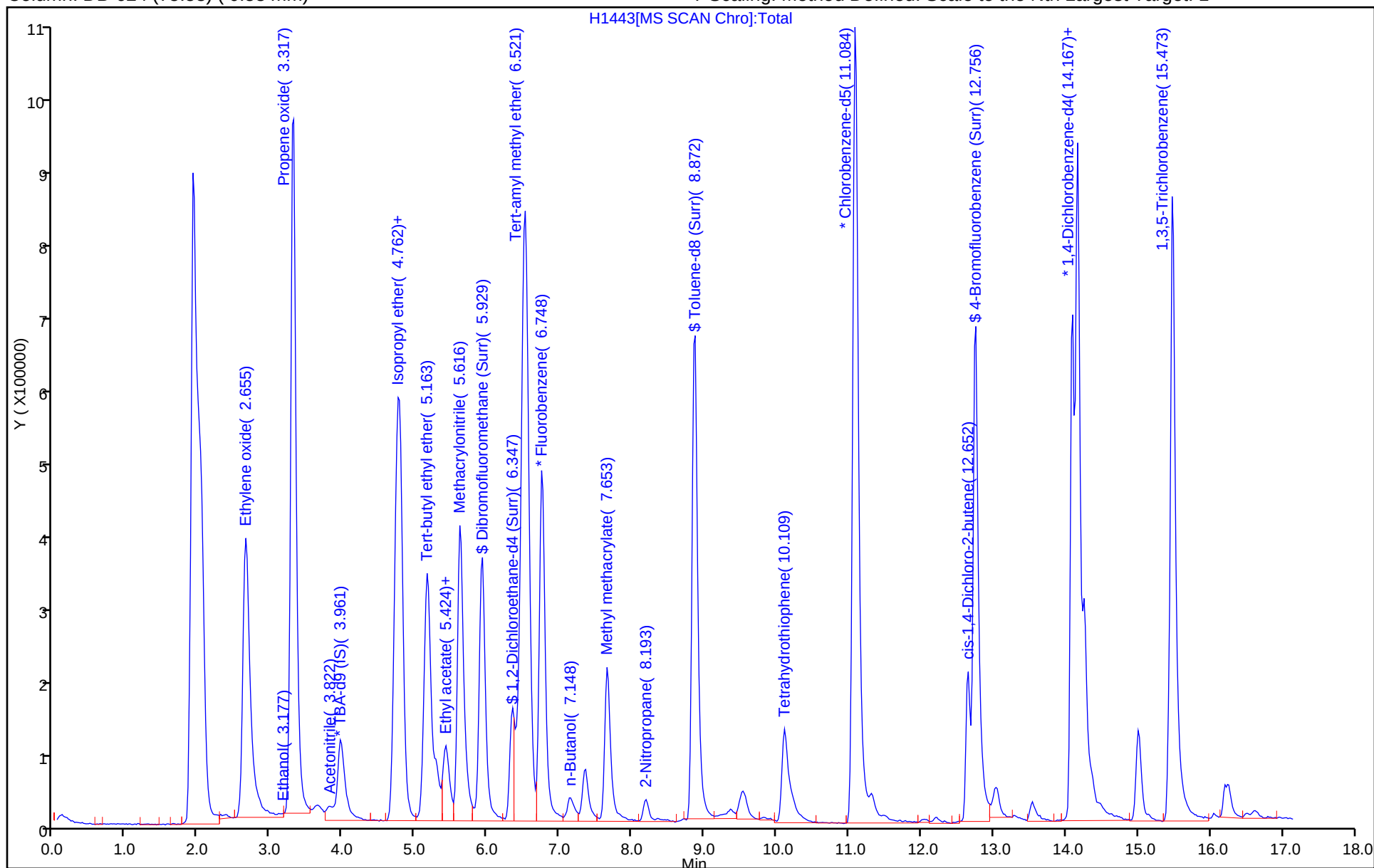
ALS Bottle#: 2

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: CCV 280-350526/3 Calibration Date: 11/09/2016 07:28
 Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22
 Lab File ID: H1443.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.5859	0.6483		10.8	9.75	10.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2395	0.2417		9.84	9.75	0.9	20.0
Toluene-d8 (Surr)	Ave	5.617	5.109		8.87	9.75	-9.1	20.0
4-Bromofluorobenzene (Surr)	Ave	1.705	1.613		9.23	9.75	-5.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1443.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Nov-2016 07:28:30 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccv
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub86
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:41 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 11:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.979	3.979	0.000	96	229961	250.0	250.0	
* 2 Fluorobenzene	96	6.748	6.748	0.000	99	1233730	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.084	11.084	0.000	86	333747	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.097	14.097	0.000	94	563343	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.929	5.929	0.000	94	623833	9.75	10.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.347	6.347	0.000	97	232625	9.75	9.84	
\$ 10 Toluene-d8 (Surr)	98	8.855	8.855	0.000	92	1329994	9.75	8.87	
\$ 11 4-Bromofluorobenzene (Surr	95	12.756	12.756	0.000	92	708910	9.75	9.23	
34 Ethylene oxide	43	2.655	2.655	0.000	99	441487	1000.0	876.7	
39 Ethanol	45	3.177	3.177	0.000	92	27985	400.0	347.9	
43 Propene oxide	58	3.317	3.317	0.000	96	2301941	1000.0	1004.7	
49 Isopropyl alcohol	45		3.527				ND	ND	
51 Acetonitrile	41	3.822	3.822	0.000	100	60962	100.0	90.1	
62 Isopropyl ether	87	4.745	4.745	0.000	97	304663	10.0	10.9	
63 2-Chloro-1,3-butadiene	53	4.797	4.797	0.000	88	503940	10.0	10.0	
64 Tert-butyl ethyl ether	59	5.163	5.163	0.000	98	975894	10.0	10.9	
69 Ethyl acetate	43	5.407	5.407	0.000	99	265253	20.0	19.3	
70 Propionitrile	54	5.459	5.459	0.000	97	92744	100.0	101.9	
72 Methacrylonitrile	41	5.616	5.616	0.000	92	601327	100.0	88.1	
83 Tert-amyl methyl ether	73	6.539	6.539	0.000	98	817754	10.0	11.8	
85 n-Butanol	56	7.148	7.148	0.000	83	62741	250.0	254.2	
91 Methyl methacrylate	100	7.653	7.653	0.000	89	119863	20.0	20.3	
95 2-Nitropropane	41	8.193	8.193	0.000	98	49426	20.0	19.2	
107 Tetrahydrothiophene	60	10.109	10.109	0.000	42	5048	20.0	5.88	
119 cis-1,4-Dichloro-2-butene	53	12.652	12.652	0.000	92	121749	20.0	19.0	
135 1,2,3-Trimethylbenzene	105	14.167	14.167	0.000	96	1220277	10.0	9.65	
140 1,3,5-Trichlorobenzene	180	15.491	15.491	0.000	98	759293	10.0	10.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 5.00	Units: uL	
MV-568718-D_00006	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.78	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1443.D

Injection Date: 09-Nov-2016 07:28:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

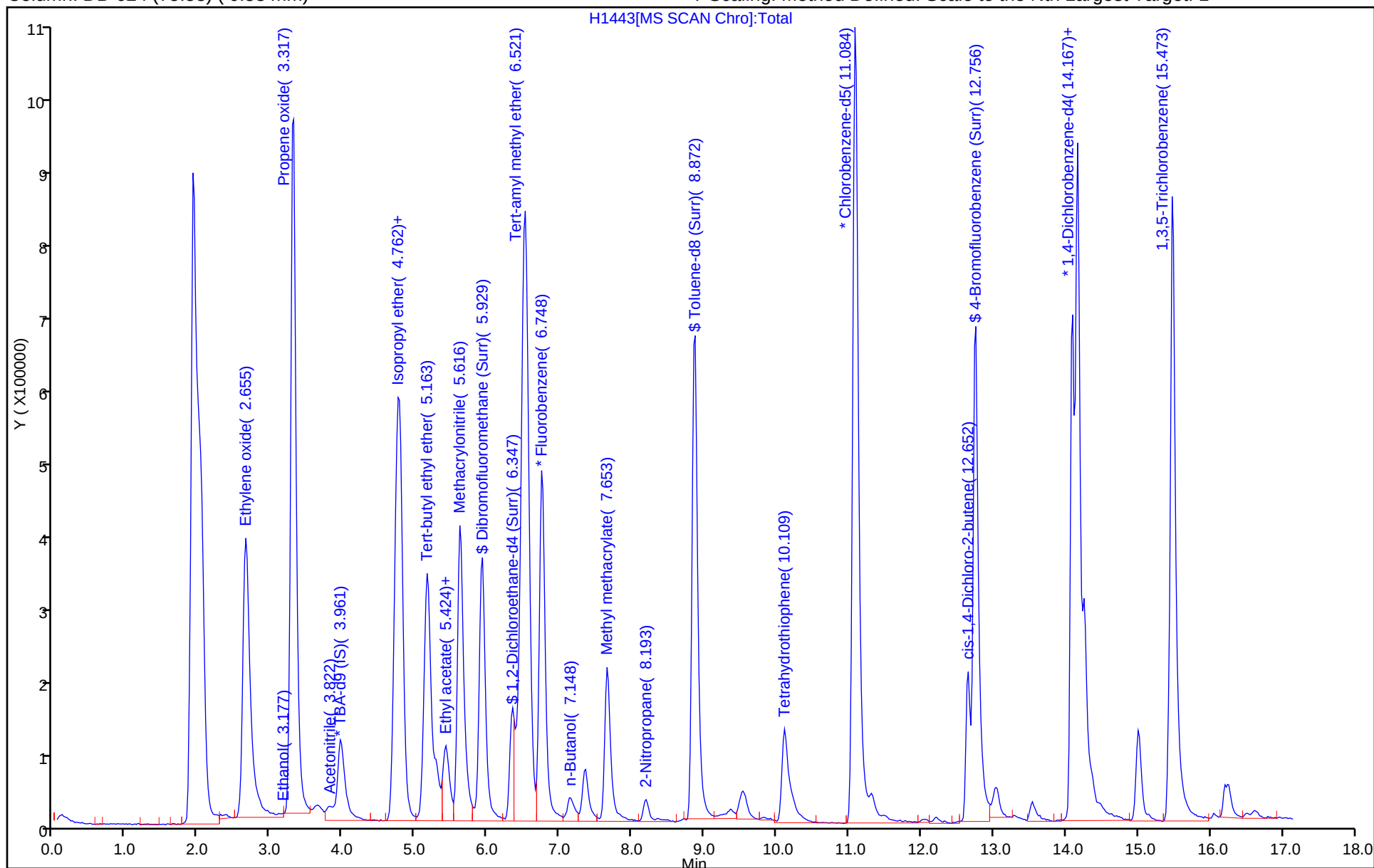
ALS Bottle#: 2

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCVC 280-350526/34 Calibration Date: 11/09/2016 16:44

Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22

Lab File ID: H1466.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Lin1		0.3766		9.38	10.0	-6.2	50.0
Chloromethane	Lin1		0.2490	0.1000	8.18	10.0	-18.2	50.0
Vinyl chloride	Ave	0.3061	0.2873		9.39	10.0	-6.1	50.0
Bromomethane	Ave	0.2731	0.2941		10.8	10.0	7.7	50.0
Chloroethane	Ave	0.2113	0.1996		9.45	10.0	-5.5	50.0
Dichlorofluoromethane	Ave	0.7483	0.7686		10.3	10.0	2.7	50.0
Trichlorofluoromethane	Ave	0.5124	0.5568		10.9	10.0	8.7	50.0
Ethyl ether	Ave	0.1773	0.1719		9.70	10.0	-3.0	50.0
Acrolein	Ave	0.0267	0.0225		84.0	100	-15.9	50.0
1,1-Dichloroethene	Ave	0.3216	0.3279		10.2	10.0	1.9	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.4038	0.4249		10.5	10.0	5.2	50.0
Acetone	Ave	0.0252	0.0244		38.7	40.0	-3.2	50.0
Iodomethane	Ave	0.7350	0.8235		11.2	10.0	12.0	50.0
Carbon disulfide	Ave	1.141	1.189		10.4	10.0	4.2	50.0
3-Chloro-1-propene	Ave	0.5738	0.5317		9.27	10.0	-7.3	50.0
Methyl acetate	Ave	0.0975	0.0862		44.2	50.0	-11.6	50.0
Methylene Chloride	Ave	0.3446	0.3855		11.2	10.0	11.9	50.0
t-Butyl alcohol	Ave	1.243	1.169		94.0	100	-6.0	50.0
Acrylonitrile	Ave	0.0279	0.0245		87.8	100	-12.2	50.0
Methyl tert-butyl ether	Ave	0.5438	0.5337		9.82	10.0	-1.8	50.0
trans-1,2-Dichloroethene	Ave	0.3618	0.3765		10.4	10.0	4.0	50.0
Hexane	Ave	2.291	1.953		8.53	10.0	-14.7	50.0
1,1-Dichloroethane	Ave	0.6818	0.6530	0.1000	9.58	10.0	-4.2	50.0
Vinyl acetate	Ave	0.7013	0.5258		15.0	20.0	-25.0	50.0
2,2-Dichloropropane	Lin		0.4783		9.17	10.0	-8.3	50.0
2-Butanone (MEK)	Ave	0.0483	0.0433		35.9	40.0	-10.3	50.0
cis-1,2-Dichloroethene	Ave	0.3785	0.3868		10.2	10.0	2.2	50.0
sec-Butyl Alcohol	Ave	1.106	0.9940		135	150	-10.2	50.0
Bromochloromethane	Ave	0.1752	0.1965		11.2	10.0	12.1	50.0
Tetrahydrofuran	Ave	0.0359	0.0286		15.9	20.0	-20.5	50.0
Chloroform	Ave	0.6324	0.6485		10.3	10.0	2.5	50.0
1,1,1-Trichloroethane	Ave	0.5401	0.5674		10.5	10.0	5.1	50.0
Cyclohexane	Ave	0.6044	0.5407		8.95	10.0	-10.5	50.0
1,1-Dichloropropene	Ave	0.5342	0.5214		9.76	10.0	-2.4	50.0
Carbon tetrachloride	Ave	0.5107	0.5493		10.8	10.0	7.5	50.0
Isobutyl alcohol	Ave	0.3751	0.3289		219	250	-12.3	50.0
Benzene	Ave	1.071	1.080		10.1	10.0	0.8	50.0
1,2-Dichloroethane	Ave	0.2388	0.2578		10.8	10.0	8.0	50.0
Trichloroethene	Ave	0.4579	0.4870		10.6	10.0	6.4	50.0
2-Pentanone	Ave	0.2126	0.1710		16.1	20.0	-19.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCVC 280-350526/34 Calibration Date: 11/09/2016 16:44

Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59

GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22

Lab File ID: H1466.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5172	0.4919		9.51	10.0	-4.9	50.0
1,2-Dichloropropane	Ave	0.4127	0.3806		9.22	10.0	-7.8	50.0
Dibromomethane	Ave	0.2149	0.2253		10.5	10.0	4.8	50.0
1,4-Dioxane	Lin2		0.0012		194	200	-3.2	50.0
Bromodichloromethane	Ave	0.5537	0.5747		10.4	10.0	3.8	50.0
2-Chloroethyl vinyl ether	Qua		0.1024		6.17	10.0	-38.3	50.0
cis-1,3-Dichloropropene	Ave	2.166	2.029		9.37	10.0	-6.3	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1530	0.1513		39.5	40.0	-1.1	50.0
Toluene	Ave	1.201	1.279		10.7	10.0	6.5	50.0
trans-1,3-Dichloropropene	Ave	0.3554	0.3574		10.1	10.0	0.6	50.0
Ethyl methacrylate	Ave	1.266	1.138		8.99	10.0	-10.1	50.0
1,1,2-Trichloroethane	Lin2		0.2588		10.6	10.0	5.6	50.0
Tetrachloroethene	Ave	1.795	1.879		10.5	10.0	4.7	50.0
1,3-Dichloropropane	Ave	1.648	1.554		9.43	10.0	-5.7	50.0
2-Hexanone	Lin2		0.3859		35.0	40.0	-12.6	50.0
Dibromochloromethane	Ave	1.808	1.855		10.3	10.0	2.6	50.0
1,2-Dibromoethane	Ave	1.299	1.324		10.2	10.0	2.0	50.0
1-Chlorohexane	Ave	2.653	2.294		4.32	5.00	-13.5	50.0
Chlorobenzene	Ave	3.686	3.722	0.3000	10.1	10.0	1.0	50.0
1,1,1,2-Tetrachloroethane	Ave	1.774	1.808		10.2	10.0	1.9	50.0
Ethylbenzene	Ave	1.788	1.775		9.93	10.0	-0.7	50.0
m-Xylene & p-Xylene	Ave	2.452	2.445		9.97	10.0	-0.3	50.0
o-Xylene	Ave	2.217	2.231		10.1	10.0	0.6	50.0
Styrene	Ave	3.536	3.579		10.1	10.0	1.2	50.0
Bromoform	Ave	1.033	1.104	0.1000	10.7	10.0	6.9	50.0
Isopropylbenzene	Ave	4.145	3.769		9.09	10.0	-9.1	50.0
Cyclohexanone	Ave	0.0175	0.0165		377	400	-5.7	50.0
1,1,2,2-Tetrachloroethane	Ave	0.9037	0.7240	0.3000	8.01	10.0	-19.9	50.0
Bromobenzene	Ave	1.084	1.090		10.1	10.0	0.5	50.0
1,2,3-Trichloropropane	Ave	0.2025	0.1756		8.67	10.0	-13.3	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1716	0.1423		8.29	10.0	-17.1	50.0
N-Propylbenzene	Ave	1.019	0.9371		9.20	10.0	-8.0	50.0
2-Chlorotoluene	Ave	0.8559	0.8010		9.36	10.0	-6.4	50.0
1,3,5-Trimethylbenzene	Ave	2.955	2.770		9.37	10.0	-6.3	50.0
4-Chlorotoluene	Ave	1.000	0.9702		9.70	10.0	-3.0	50.0
tert-Butylbenzene	Ave	3.422	3.177		9.28	10.0	-7.2	50.0
1,2,4-Trimethylbenzene	Ave	2.864	2.695		9.41	10.0	-5.9	50.0
sec-Butylbenzene	Ave	0.8951	0.8235		9.20	10.0	-8.0	50.0
1,3-Dichlorobenzene	Ave	1.627	1.616		9.93	10.0	-0.7	50.0
4-Isopropyltoluene	Ave	3.750	3.531		9.42	10.0	-5.8	50.0
1,4-Dichlorobenzene	Ave	2.220	2.124		9.57	10.0	-4.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: CCVC 280-350526/34 Calibration Date: 11/09/2016 16:44
 Instrument ID: VMS_H Calib Start Date: 11/02/2016 10:59
 GC Column: DB-624 (75.53) ID: 0.53 (mm) Calib End Date: 11/02/2016 13:22
 Lab File ID: H1466.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	3.490	3.127		8.96	10.0	-10.4	50.0
1,2-Dichlorobenzene	Ave	1.615	1.591		9.86	10.0	-1.4	50.0
1,2-Dibromo-3-Chloropropane	Lin2		0.1596		9.29	10.0	-7.1	50.0
1,2,4-Trichlorobenzene	Ave	1.160	1.189		10.3	10.0	2.6	50.0
Hexachlorobutadiene	Ave	1.054	1.060		10.1	10.0	0.6	50.0
Naphthalene	Ave	1.203	1.135		9.44	10.0	-5.6	50.0
1,2,3-Trichlorobenzene	Ave	0.8915	0.9046		10.1	10.0	1.5	50.0
Dibromofluoromethane (Surr)	Ave	0.5859	0.6363		10.6	9.75	8.6	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2395	0.2590		10.5	9.75	8.1	50.0
Toluene-d8 (Surr)	Ave	5.617	5.673		9.85	9.75	1.0	50.0
4-Bromofluorobenzene (Surr)	Ave	1.705	1.652		9.45	9.75	-3.1	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1466.D
 Lims ID: ccvc
 Client ID:
 Sample Type: CCVC
 Inject. Date: 09-Nov-2016 16:44:30 ALS Bottle#: 25 Worklist Smp#: 34
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ccvc
 Operator ID: moanm Instrument ID: VMS_H
 Sublist: chrom-AQ_VMSH_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 13-Nov-2016 11:54:29 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: bergerb

Date: 09-Nov-2016 19:03:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.978	3.978	0.000	96	230394	250.0	250.0	
* 2 Fluorobenzene	96	6.765	6.765	0.000	99	1209393	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.101	11.101	0.000	86	305162	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.097	14.097	0.000	96	525917	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.929	5.929	0.000	94	600203	9.75	10.6	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.347	6.347	0.000	97	244350	9.75	10.5	
\$ 10 Toluene-d8 (Surr)	98	8.872	8.872	0.000	91	1350236	9.75	9.85	
\$ 11 4-Bromofluorobenzene (Surr	95	12.756	12.756	0.000	91	677535	9.75	9.45	
28 Dichlorodifluoromethane	85	2.149	2.149	0.000	100	364367	10.0	9.38	
30 Chloromethane	50	2.271	2.271	0.000	98	240910	10.0	8.18	
32 Vinyl chloride	62	2.393	2.393	0.000	98	277992	10.0	9.39	
35 Bromomethane	94	2.689	2.689	0.000	90	284527	10.0	10.8	
36 Chloroethane	64	2.759	2.759	0.000	99	193125	10.0	9.45	
37 Dichlorofluoromethane	67	2.951	2.951	0.000	99	743580	10.0	10.3	
38 Trichlorofluoromethane	101	3.003	3.003	0.000	100	538747	10.0	10.9	
40 Ethyl ether	59	3.229	3.229	0.000	94	166347	10.0	9.70	
44 Acrolein	56	3.369	3.369	0.000	99	217256	100.0	84.0	
45 1,1-Dichloroethene	96	3.473	3.473	0.000	97	317201	10.0	10.2	
46 1,1,2-Trichloro-1,2,2-trif	151	3.508	3.508	0.000	97	411054	10.0	10.5	
47 Acetone	43	3.525	3.525	0.000	100	94555	40.0	38.7	
48 Iodomethane	142	3.647	3.647	0.000	98	796749	10.0	11.2	
50 Carbon disulfide	76	3.734	3.734	0.000	99	1150728	10.0	10.4	
52 3-Chloro-1-propene	41	3.821	3.821	0.000	85	514401	10.0	9.27	
53 Methyl acetate	43	3.839	3.839	0.000	96	417207	50.0	44.2	
54 Methylene Chloride	84	3.961	3.961	0.000	96	372979	10.0	11.2	
55 2-Methyl-2-propanol	59	4.065	4.065	0.000	98	107714	100.0	94.0	
57 Acrylonitrile	53	4.222	4.222	0.000	98	236797	100.0	87.8	
56 Methyl tert-butyl ether	73	4.239	4.239	0.000	96	516374	10.0	9.82	
58 trans-1,2-Dichloroethene	96	4.239	4.239	0.000	99	364255	10.0	10.4	
59 Hexane	57	4.518	4.518	0.000	91	476739	10.0	8.53	
60 1,1-Dichloroethane	63	4.692	4.692	0.000	96	631739	10.0	9.58	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 Vinyl acetate	43	4.727	4.727	0.000	97	1017375	20.0	15.0	
67 2-Butanone (MEK)	43	5.371	5.371	0.000	44	167636	40.0	35.9	
65 cis-1,2-Dichloroethene	96	5.371	5.371	0.000	83	374201	10.0	10.2	
66 2,2-Dichloropropane	77	5.371	5.371	0.000	89	462787	10.0	9.17	
71 sec-Butyl Alcohol	45	5.580	5.580	0.000	95	137404	150.0	134.8	
73 Chlorobromomethane	128	5.650	5.650	0.000	93	190068	10.0	11.2	
74 Tetrahydrofuran	42	5.720	5.720	0.000	93	55280	20.0	15.9	
75 Chloroform	83	5.737	5.737	0.000	95	627402	10.0	10.3	
76 1,1,1-Trichloroethane	97	5.981	5.981	0.000	98	548992	10.0	10.5	
77 Cyclohexane	56	6.051	6.051	0.000	88	523100	10.0	8.95	
78 1,1-Dichloropropene	75	6.155	6.155	0.000	98	504423	10.0	9.76	
79 Carbon tetrachloride	117	6.173	6.173	0.000	98	531416	10.0	10.8	
80 Isobutyl alcohol	41	6.294	6.294	0.000	92	75772	250.0	219.2	
81 Benzene	78	6.416	6.416	0.000	97	1044732	10.0	10.1	
82 1,2-Dichloroethane	62	6.434	6.434	0.000	94	249417	10.0	10.8	
84 n-Heptane	43	6.712	6.712	0.000	93	568175	10.0	9.17	
86 Trichloroethene	95	7.235	7.235	0.000	97	471161	10.0	10.6	
88 2-Pentanone	43	7.461	7.461	0.000	98	330845	20.0	16.1	
89 Methylcyclohexane	55	7.479	7.479	0.000	92	475871	10.0	9.51	
90 1,2-Dichloropropane	63	7.531	7.531	0.000	97	368236	10.0	9.22	
92 Dibromomethane	93	7.688	7.688	0.000	95	217982	10.0	10.5	
93 1,4-Dioxane	88	7.705	7.705	0.000	32	23319	200.0	193.5	
94 Dichlorobromomethane	83	7.897	7.897	0.000	99	555981	10.0	10.4	
96 2-Chloroethyl vinyl ether	63	8.297	8.297	0.000	92	99076	10.0	6.17	
97 cis-1,3-Dichloropropene	75	8.489	8.489	0.000	97	495442	10.0	9.37	
98 4-Methyl-2-pentanone (MIBK)	43	8.715	8.715	0.000	96	585367	40.0	39.5	
99 Toluene	91	8.959	8.959	0.000	99	1237436	10.0	10.7	
100 trans-1,3-Dichloropropene	75	9.273	9.273	0.000	92	345785	10.0	10.1	
101 Ethyl methacrylate	69	9.394	9.394	0.000	89	277891	10.0	8.99	
102 1,1,2-Trichloroethane	97	9.534	9.534	0.000	90	250379	10.0	10.6	
103 Tetrachloroethene	164	9.743	9.743	0.000	97	458833	10.0	10.5	
104 1,3-Dichloropropane	76	9.778	9.778	0.000	87	379343	10.0	9.43	
105 2-Hexanone	43	9.917	9.917	0.000	95	376814	40.0	35.0	
108 Chlorodibromomethane	129	10.143	10.143	0.000	90	452877	10.0	10.3	
109 Ethylene Dibromide	107	10.335	10.335	0.000	98	323344	10.0	10.2	
110 1-Chlorohexane	91	11.101	11.101	0.000	95	280046	5.00	4.32	
111 Chlorobenzene	112	11.136	11.136	0.000	95	908597	10.0	10.1	
112 1,1,1,2-Tetrachloroethane	131	11.275	11.275	0.000	98	441340	10.0	10.2	
113 Ethylbenzene	106	11.310	11.310	0.000	98	433389	10.0	9.93	
114 m-Xylene & p-Xylene	106	11.502	11.502	0.000	100	596840	10.0	9.97	
115 o-Xylene	106	12.059	12.059	0.000	96	544551	10.0	10.1	
116 Styrene	104	12.094	12.094	0.000	95	873620	10.0	10.1	
117 Bromoform	173	12.338	12.338	0.000	98	269622	10.0	10.7	
118 Isopropylbenzene	105	12.564	12.564	0.000	95	1585658	10.0	9.09	
120 Cyclohexanone	55	12.686	12.686	0.000	88	161045	400.0	377.1	
121 1,1,2,2-Tetrachloroethane	83	12.947	12.947	0.000	96	304607	10.0	8.01	
122 Bromobenzene	156	12.947	12.947	0.000	94	458547	10.0	10.1	
123 1,2,3-Trichloropropane	110	13.000	13.000	0.000	79	73869	10.0	8.67	
124 trans-1,4-Dichloro-2-buten	53	13.017	13.017	0.000	66	59867	10.0	8.29	
125 N-Propylbenzene	120	13.069	13.069	0.000	99	394256	10.0	9.20	
126 2-Chlorotoluene	126	13.174	13.174	0.000	98	337021	10.0	9.36	
127 1,3,5-Trimethylbenzene	105	13.278	13.278	0.000	95	1165225	10.0	9.37	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
128 4-Chlorotoluene	126	13.296	13.296	0.000	99	408210	10.0	9.70	
129 tert-Butylbenzene	119	13.661	13.661	0.000	94	1336556	10.0	9.28	
130 1,2,4-Trimethylbenzene	105	13.714	13.714	0.000	96	1133684	10.0	9.41	
131 sec-Butylbenzene	134	13.905	13.905	0.000	93	346489	10.0	9.20	
132 1,3-Dichlorobenzene	146	14.027	14.027	0.000	96	679728	10.0	9.93	
133 4-Isopropyltoluene	119	14.062	14.062	0.000	97	1485772	10.0	9.42	
134 1,4-Dichlorobenzene	146	14.114	14.114	0.000	96	893727	10.0	9.57	
137 n-Butylbenzene	91	14.497	14.497	0.000	97	1315465	10.0	8.96	
138 1,2-Dichlorobenzene	146	14.515	14.515	0.000	98	669546	10.0	9.86	
139 1,2-Dibromo-3-Chloropropan	157	15.298	15.298	0.000	93	67140	10.0	9.29	
141 1,2,4-Trichlorobenzene	180	16.065	16.065	0.000	94	500421	10.0	10.3	
142 Hexachlorobutadiene	225	16.204	16.204	0.000	96	445906	10.0	10.1	
143 Naphthalene	128	16.291	16.291	0.000	97	477538	10.0	9.44	
144 1,2,3-Trichlorobenzene	180	16.518	16.518	0.000	95	380574	10.0	10.1	
S 151 1,2-Dichloroethene, Total	96				0		20.0	20.6	
S 145 Trihalomethanes, Total	1				0		40.0	41.6	
S 146 Xylenes, Total (URS)	1				0		20.0	20.0	
S 147 Total BTEX	1				0			50.7	
S 148 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 149 1,2-Dichloroethene, Total	1				0		20.0	20.6	
S 150 Xylenes, Total	106				0		20.0	20.0	

Reagents:

MV-Main A_00027	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL	
MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL	
MV-568718-D_00006	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.78	Units: uL	Run Reagent

Report Date: 13-Nov-2016 11:54:30

Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1466.D

Injection Date: 09-Nov-2016 16:44:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: ccvc

Worklist Smp#: 34

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

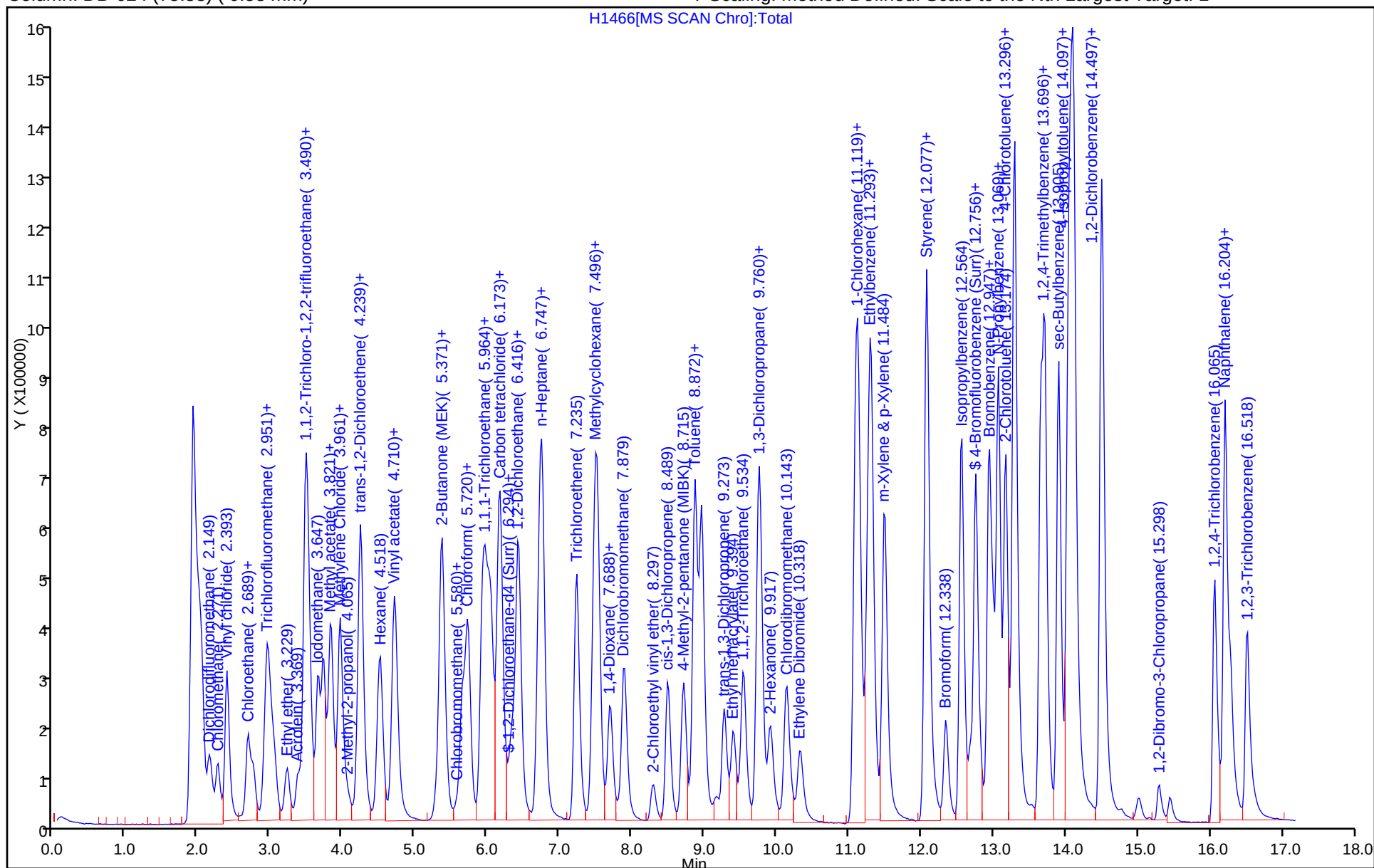
ALS Bottle#: 25

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: ICV 280-341836/27 Calibration Date: 09/13/2016 14:32
 Instrument ID: VMS_P Calib Start Date: 09/13/2016 12:16
 GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 09/13/2016 13:53
 Lab File ID: P1853.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.2164	0.2908		538	400	34.4*	20.0
Isopropyl alcohol	Ave	1.301	1.471		113	100	13.1	20.0
Acetonitrile	Lin1		0.0146		110	100	9.5	20.0
Isopropyl ether	Ave	0.1949	0.2369		12.2	10.0	21.6*	20.0
2-Chloro-1,3-butadiene	Ave	0.6473	0.7326		11.3	10.0	13.2	20.0
Tert-butyl ethyl ether	Ave	0.6289	0.7386		11.7	10.0	17.5	20.0
Ethyl acetate	Ave	0.1084	0.1211		22.3	20.0	11.7	20.0
Propionitrile	Ave	0.0113	0.0133		118	100	17.7	20.0
Methacrylonitrile	Ave	0.0796	0.0945		119	100	18.8	20.0
Tert-amyl methyl ether	Ave	0.4073	0.4940		12.1	10.0	21.3*	20.0
n-Butanol	Lin		0.3024		234	250	-6.3	20.0
Methyl methacrylate	Lin2		0.0244		23.4	20.0	17.2	20.0
2-Nitropropane	Lin1		0.0101		19.6	20.0	-2.2	20.0
cis-1,4-Dichloro-2-butene	Lin2		0.1644		23.3	20.0	16.4	20.0
1,2,3-Trimethylbenzene	Ave	3.577	4.238		11.8	10.0	18.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2523	0.2676		10.6	10.0	6.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2559	0.2781		10.9	10.0	8.7	20.0
Toluene-d8 (Surr)	Ave	5.989	6.141		10.3	10.0	2.5	20.0
4-Bromofluorobenzene (Surr)	Ave	1.254	1.309		10.4	10.0	4.4	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1853.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 13-Sep-2016 14:32:30 ALS Bottle#: 27 Worklist Smp#: 27
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 14-Sep-2016 16:47:02 Calib Date: 13-Sep-2016 13:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: seifertj

Date: 14-Sep-2016 07:54:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.665	5.665	0.000	92	110197	250.0	250.0	
* 1 Fluorobenzene	96	7.639	7.639	0.000	97	1070109	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.905	9.905	0.000	92	201656	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.736	11.736	0.000	97	289071	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.095	7.095	0.000	92	229113	10.0	10.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.388	7.388	0.000	98	238075	10.0	10.9	
\$ 7 Toluene-d8 (Surr)	98	8.826	8.826	0.000	96	990642	10.0	10.3	
\$ 8 4-Bromofluorobenzene (Surr	95	10.770	10.770	0.000	83	302809	10.0	10.4	
28 Ethylene oxide	43	4.585	4.585	0.000	100	531415	1000.0	838.1	
33 Ethanol	45	4.990	4.990	0.000	98	51278	400.0	537.7	
38 Propene oxide	58	5.228	5.228	0.000	96	2395042	1000.0	1157.7	
42 Isopropyl alcohol	45	5.409	5.409	0.000	95	64838	100.0	113.1	
46 Acetonitrile	41	5.651	5.651	0.000	97	125229	100.0	109.5	
56 Isopropyl ether	87	6.259	6.259	0.000	95	202842	10.0	12.2	
58 2-Chloro-1,3-butadiene	53	6.380	6.380	0.000	95	627185	10.0	11.3	
59 Tert-butyl ethyl ether	59	6.538	6.538	0.000	98	632319	10.0	11.7	
60 Ethyl acetate	43	6.688	6.688	0.000	99	207293	20.0	22.3	
65 Propionitrile	54	6.781	6.781	0.000	98	113524	100.0	117.7	
66 Methacrylonitrile	41	6.895	6.895	0.000	97	809146	100.0	118.8	
75 Tert-amyl methyl ether	73	7.438	7.438	0.000	91	422885	10.0	12.1	
78 n-Butanol	56	7.682	7.682	0.000	95	33320	250.0	234.3	
81 Methyl methacrylate	100	8.060	8.060	0.000	91	41793	20.0	23.4	
88 2-Nitropropane	41	8.439	8.439	0.000	91	17209	20.0	19.6	
99 Tetrahydrothiophene	60	9.512	9.512	0.000	95	7343	NC	NC	
110 cis-1,4-Dichloro-2-butene	53	10.649	10.649	0.000	95	76048	20.0	23.3	
125 1,2,3-Trimethylbenzene	105	11.750	11.750	0.000	98	980035	10.0	11.8	
16 1,3,5-Trichlorobenzene	180	13.080	13.080	0.000	95	376900	10.0	11.9	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

MV-Supp B_00014	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00073	Amount Added: 0.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1853.D

Injection Date: 13-Sep-2016 14:32:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: ICV

Worklist Smp#: 27

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

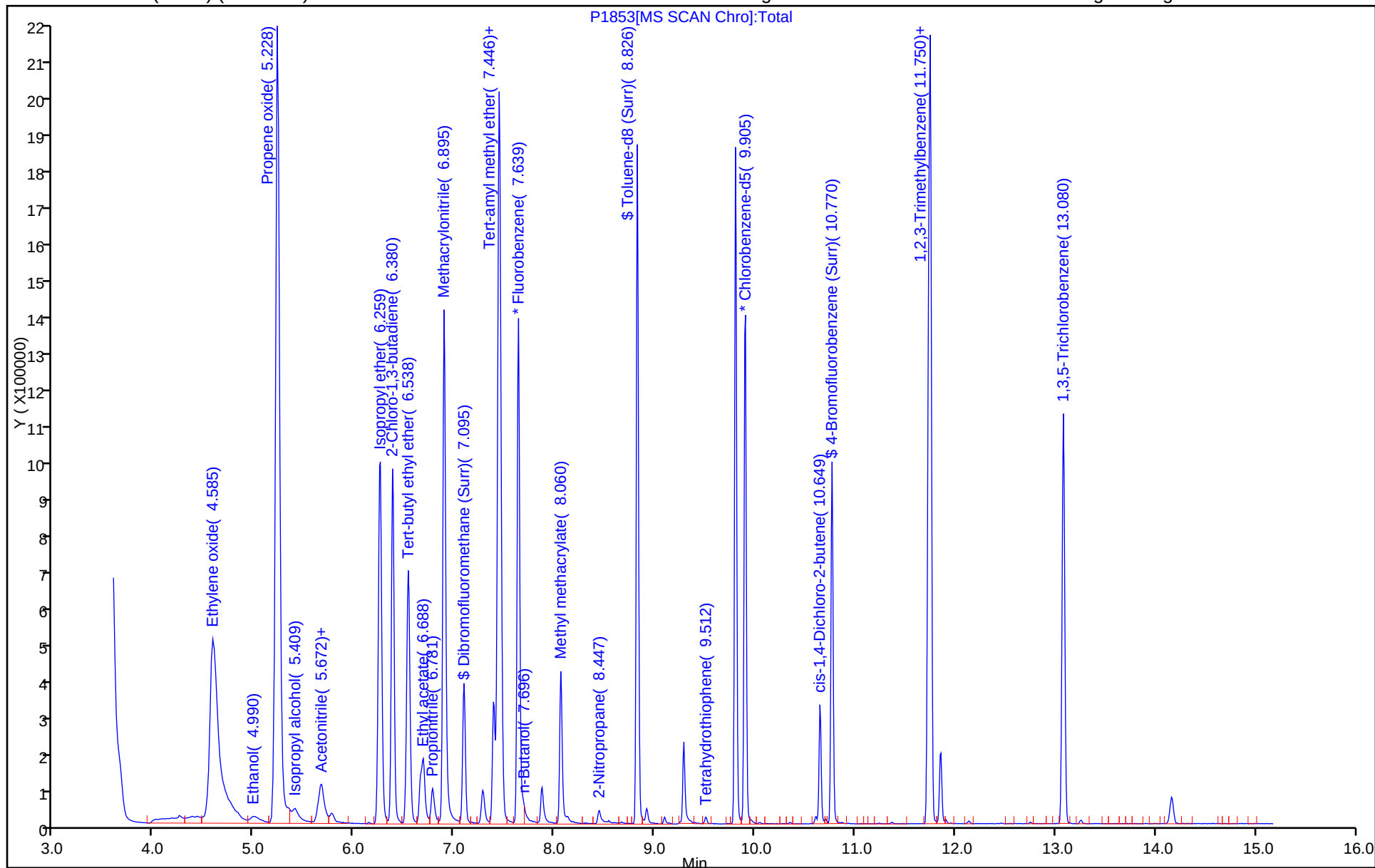
ALS Bottle#: 27

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: ICV 280-347337/17 Calibration Date: 10/20/2016 12:30
Instrument ID: VMS_P Calib Start Date: 09/16/2016 09:16
GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 09/16/2016 11:21
Lab File ID: P2908.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1290			40.0		20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2908.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 20-Oct-2016 12:30:30 ALS Bottle#: 19 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:57 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 16:52:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.651	5.651	0.000	37	176921	250.0	250.0	
* 1 Fluorobenzene	96	7.618	7.618	0.000	97	1833301	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	90	379274	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.707	11.707	0.000	96	578591	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.074	7.074	0.000	92	368345	10.0	9.15	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.375	7.375	0.000	99	380578	10.0	8.91	
\$ 7 Toluene-d8 (Surr)	98	8.805	8.805	0.000	95	1554663	10.0	9.39	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	82	552044	10.0	9.33	
23 Dichlorodifluoromethane	85	3.887	3.887	0.000	99	571607	10.0	8.11	
26 Chloromethane	50	4.110	4.110	0.000	98	489838	10.0	8.80	
27 Vinyl chloride	62	4.264	4.264	0.000	100	434820	10.0	8.44	
29 Bromomethane	94	4.627	4.627	0.000	95	272534	10.0	8.74	
30 Chloroethane	64	4.697	4.697	0.000	97	254571	10.0	8.25	
31 Dichlorofluoromethane	67	4.865	4.865	0.000	99	742690	10.0	8.06	
32 Trichlorofluoromethane	101	4.962	4.962	0.000	99	748103	10.0	8.23	
35 Ethyl ether	59	5.102	5.102	0.000	95	252270	10.0	10.9	a
39 Acrolein	56	5.270	5.270	0.000	99	135443	100.0	112.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.367	5.367	0.000	95	408030	10.0	9.68	
41 Acetone	43	5.367	5.367	0.000	96	225069	40.0	39.0	
43 1,1-Dichloroethene	96	5.409	5.409	0.000	94	529866	10.0	10.3	
44 Iodomethane	142	5.587	5.587	0.000	98	708665	10.0	10.2	
45 Methyl acetate	43	5.608	5.608	0.000	99	604323	50.0	50.7	
47 3-Chloro-1-propene	41	5.658	5.658	0.000	88	979014	10.0	10.5	
48 Carbon disulfide	76	5.701	5.701	0.000	100	1897724	10.0	10.7	
49 2-Methyl-2-propanol	59	5.716	5.716	0.000	36	119638	100.0	117.4	
50 Methylene Chloride	84	5.766	5.766	0.000	98	445587	10.0	9.83	
51 Methyl tert-butyl ether	73	5.923	5.923	0.000	97	650769	10.0	10.5	
52 Acrylonitrile	53	5.923	5.923	0.000	84	516618	100.0	109.1	
53 trans-1,2-Dichloroethene	96	5.973	5.973	0.000	94	497001	10.0	10.1	
54 Hexane	57	6.123	6.123	0.000	95	897118	10.0	10.6	
55 Vinyl acetate	43	6.238	6.238	0.000	97	799563	20.0	19.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.295	6.295	0.000	98	933872	10.0	9.95	
61 2-Butanone (MEK)	43	6.688	6.688	0.000	99	345174	40.0	42.8	
62 sec-Butyl Alcohol	45	6.731	6.731	0.000	93	245145	300.0	317.9	
63 cis-1,2-Dichloroethene	96	6.738	6.738	0.000	91	478940	10.0	10.4	
64 2,2-Dichloropropane	77	6.760	6.760	0.000	84	637586	10.0	9.93	
67 Chlorobromomethane	128	6.938	6.938	0.000	91	153960	10.0	10.5	
68 Chloroform	83	6.946	6.946	0.000	98	825367	10.0	9.90	
69 Tetrahydrofuran	42	6.967	6.967	0.000	90	92743	20.0	20.5	
70 Isobutyl alcohol	41	7.146	7.146	0.000	42	94254	250.0	264.1	
71 1,1,1-Trichloroethane	97	7.153	7.153	0.000	97	717862	10.0	9.87	
72 Cyclohexane	56	7.224	7.224	0.000	97	1039941	10.0	10.5	
73 1,1-Dichloropropene	75	7.260	7.260	0.000	92	753782	10.0	10.1	
74 Carbon tetrachloride	117	7.296	7.296	0.000	96	673651	10.0	9.74	
76 1,2-Dichloroethane	62	7.432	7.432	0.000	98	498068	10.0	10.2	
77 Benzene	78	7.446	7.446	0.000	99	1880101	10.0	10.2	
14 n-Heptane	43	7.503	7.503	0.000	96	1034861	10.0	10.5	
79 Trichloroethene	95	7.904	7.904	0.000	94	504957	10.0	9.94	
80 2-Pentanone	43	7.961	7.961	0.000	97	756631	NC	NC	
82 Methylcyclohexane	55	8.090	8.090	0.000	96	849212	10.0	9.97	
83 1,2-Dichloropropane	63	8.097	8.097	0.000	87	424534	10.0	10.2	
84 1,4-Dioxane	88	8.147	8.147	0.000	94	21227	200.0	164.6	
85 Dibromomethane	93	8.204	8.204	0.000	90	157158	10.0	10.4	
86 Dichlorobromomethane	83	8.275	8.275	0.000	98	486214	10.0	10.4	
87 2-Chloroethyl vinyl ether	63	8.411	8.411	0.000	94	45523	10.0	7.62	
89 cis-1,3-Dichloropropene	75	8.590	8.590	0.000	89	520481	10.0	9.72	
90 4-Methyl-2-pentanone (MIBK)	43	8.647	8.647	0.000	100	626449	40.0	38.2	
91 Toluene	91	8.862	8.862	0.000	97	1987219	10.0	10.4	
92 Ethyl methacrylate	69	8.940	8.940	0.000	92	213888	10.0	9.77	
93 trans-1,3-Dichloropropene	75	8.969	8.969	0.000	98	382028	10.0	9.66	
94 1,1,2-Trichloroethane	97	9.126	9.126	0.000	95	208453	10.0	10.3	
95 2-Hexanone	43	9.234	9.234	0.000	97	423930	40.0	39.5	
96 1,3-Dichloropropane	76	9.255	9.255	0.000	96	390183	10.0	10.3	
97 Tetrachloroethene	164	9.269	9.269	0.000	93	393928	10.0	10.0	
98 Chlorodibromomethane	129	9.448	9.448	0.000	90	233894	10.0	9.24	
100 Ethylene Dibromide	107	9.577	9.577	0.000	98	187724	10.0	10.8	
101 1-Chlorohexane	91	9.791	9.791	0.000	88	677253	10.0	11.0	
102 Chlorobenzene	112	9.906	9.906	0.000	93	1127462	10.0	10.0	
103 Ethylbenzene	106	9.941	9.941	0.000	98	699446	10.0	10.1	
104 1,1,1,2-Tetrachloroethane	131	9.941	9.941	0.000	93	336283	10.0	10.4	
105 m-Xylene & p-Xylene	106	10.013	10.013	0.000	99	870767	10.0	10.5	
107 o-Xylene	106	10.328	10.328	0.000	89	810164	10.0	10.6	
106 Styrene	104	10.335	10.335	0.000	83	1148853	10.0	11.0	
108 Bromoform	173	10.542	10.542	0.000	93	90857	10.0	8.98	
109 Isopropylbenzene	105	10.585	10.585	0.000	98	2299547	10.0	10.5	
111 Cyclohexanone	55	10.735	10.735	0.000	96	181641	400.0	375.0	
112 1,1,2,2-Tetrachloroethane	83	10.807	10.807	0.000	97	218080	10.0	10.7	
113 trans-1,4-Dichloro-2-buten	53	10.842	10.842	0.000	79	58670	10.0	9.02	
114 1,2,3-Trichloropropane	110	10.878	10.878	0.000	89	62393	10.0	10.8	
115 N-Propylbenzene	120	10.907	10.907	0.000	98	647870	10.0	10.8	
116 Bromobenzene	156	10.914	10.914	0.000	97	424450	10.0	10.7	
117 1,3,5-Trimethylbenzene	105	11.014	11.014	0.000	94	1917790	10.0	10.8	
118 2-Chlorotoluene	126	11.035	11.035	0.000	95	507847	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.114	11.114	0.000	99	514302	10.0	10.6	
120 tert-Butylbenzene	119	11.314	11.314	0.000	92	1887435	10.0	10.7	
121 1,2,4-Trimethylbenzene	105	11.343	11.343	0.000	96	1942752	10.0	10.7	
122 sec-Butylbenzene	134	11.493	11.493	0.000	96	519627	10.0	10.5	
123 4-Isopropyltoluene	119	11.586	11.586	0.000	96	2166607	10.0	10.7	
124 1,3-Dichlorobenzene	146	11.665	11.665	0.000	95	920032	10.0	10.3	
126 1,4-Dichlorobenzene	146	11.729	11.729	0.000	91	901368	10.0	10.1	
127 n-Butylbenzene	91	11.951	11.951	0.000	99	2297937	10.0	10.6	
128 1,2-Dichlorobenzene	146	12.094	12.094	0.000	94	760047	10.0	10.5	
129 1,2-Dibromo-3-Chloropropan	157	12.852	12.852	0.000	69	25798	10.0	9.04	
130 1,2,4-Trichlorobenzene	180	13.795	13.795	0.000	93	536341	10.0	11.2	
131 Hexachlorobutadiene	225	13.931	13.931	0.000	95	394238	10.0	9.95	
132 Naphthalene	128	14.174	14.174	0.000	98	667229	10.0	10.0	
133 1,2,3-Trichlorobenzene	180	14.496	14.496	0.000	93	393642	10.0	10.9	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.6	
S 138 1,2-Dichloroethene, Total	1				0		10.0	20.6	
S 139 Xylenes, Total	106				0		20.0	21.1	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 134 Trihalomethanes, Total	1				0		40.0	38.5	
S 135 Xylenes, Total (URS)	1				0		20.0	21.1	
S 136 Total BTEX	1				0			51.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

MV-SS 2-Cleve_00029	Amount Added: 5.00	Units: uL
MV-Gas/Ket B_00030	Amount Added: 5.00	Units: uL
MV-Main B_00016	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2908.D

Injection Date: 20-Oct-2016 12:30:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: ICV

Worklist Smp#: 17

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

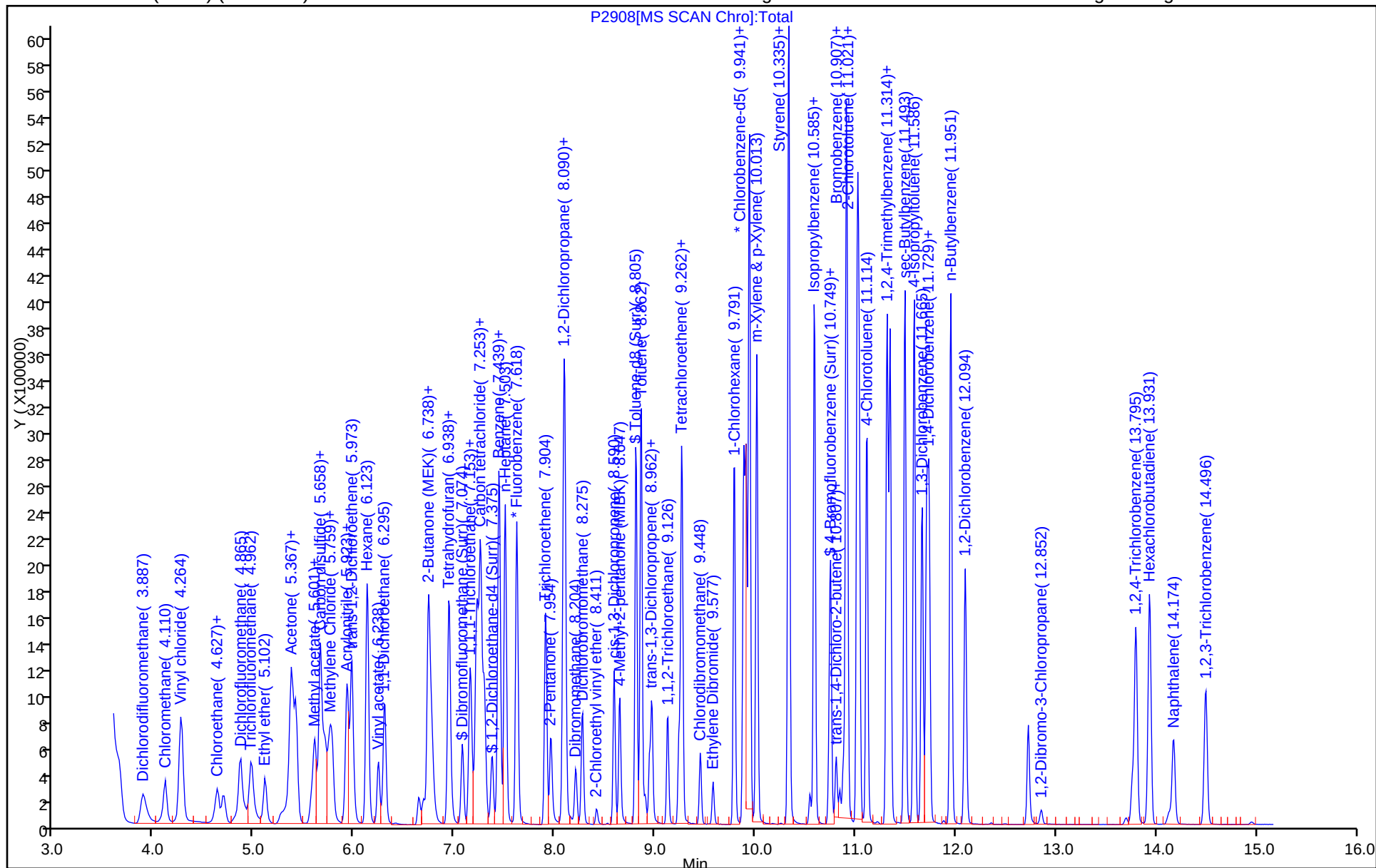
ALS Bottle#: 19

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: ICV 280-347337/17 Calibration Date: 10/20/2016 12:30

Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54

GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51

Lab File ID: P2908.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4808	0.3897		8.11	10.0	-18.9	20.0
Chloromethane	Ave	0.3796	0.3340	0.1000	8.80	10.0	-12.0	20.0
Vinyl chloride	Ave	0.3512	0.2965		8.44	10.0	-15.6	20.0
Bromomethane	Ave	0.2125	0.1858		8.74	10.0	-12.6	20.0
Chloroethane	Ave	0.2105	0.1736		8.25	10.0	-17.5	20.0
Dichlorofluoromethane	Ave	0.6286	0.5064		8.06	10.0	-19.4	20.0
Trichlorofluoromethane	Ave	0.6198	0.5101		8.23	10.0	-17.7	20.0
Ethyl ether	Ave	0.1580	0.1720		10.9	10.0	8.9	20.0
Acrolein	Ave	0.0082	0.0092		113	100	12.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2874	0.2782		9.68	10.0	-3.2	20.0
Acetone	Ave	0.0394	0.0384		39.0	40.0	-2.6	20.0
1,1-Dichloroethene	Ave	0.3500	0.3613		10.3	10.0	3.2	20.0
Iodomethane	Ave	0.4756	0.4832		10.2	10.0	1.6	20.0
Methyl acetate	Ave	0.0812	0.0824		50.7	50.0	1.5	20.0
3-Chloro-1-propene	Ave	0.6346	0.6675		10.5	10.0	5.2	20.0
Carbon disulfide	Ave	1.204	1.294		10.7	10.0	7.5	20.0
t-Butyl alcohol	Ave	1.440	1.691		117	100	17.4	20.0
Methylene Chloride	Lin1		0.3038		9.83	10.0	-1.7	20.0
Acrylonitrile	Ave	0.0323	0.0352		109	100	9.1	20.0
Methyl tert-butyl ether	Ave	0.4234	0.4437		10.5	10.0	4.8	20.0
trans-1,2-Dichloroethene	Ave	0.3344	0.3389		10.1	10.0	1.3	20.0
Hexane	Ave	2.800	2.957		10.6	10.0	5.6	20.0
Vinyl acetate	Lin2		0.2726		19.3	20.0	-3.6	20.0
1,1-Dichloroethane	Ave	0.6401	0.6367	0.1000	9.95	10.0	-0.5	20.0
2-Butanone (MEK)	Lin2		0.0588		42.8	40.0	6.9	20.0
sec-Butyl Alcohol	Ave	1.090	1.155		318	300	6.0	20.0
cis-1,2-Dichloroethene	Ave	0.3131	0.3266		10.4	10.0	4.3	20.0
2,2-Dichloropropane	Ave	0.4380	0.4347		9.93	10.0	-0.7	20.0
Bromochloromethane	Ave	0.0998	0.1050		10.5	10.0	5.2	20.0
Chloroform	Ave	0.5682	0.5628		9.90	10.0	-1.0	20.0
Tetrahydrofuran	Lin2		0.0316		20.5	20.0	2.7	20.0
Isobutyl alcohol	Ave	0.5043	0.5328		264	250	5.6	20.0
1,1,1-Trichloroethane	Ave	0.4959	0.4895		9.87	10.0	-1.3	20.0
Cyclohexane	Ave	0.6760	0.7091		10.5	10.0	4.9	20.0
1,1-Dichloropropene	Ave	0.5075	0.5140		10.1	10.0	1.3	20.0
Carbon tetrachloride	Ave	0.4714	0.4593		9.74	10.0	-2.6	20.0
1,2-Dichloroethane	Ave	0.3318	0.3396		10.2	10.0	2.3	20.0
Benzene	Ave	1.255	1.282		10.2	10.0	2.1	20.0
Trichloroethene	Ave	0.3464	0.3443		9.94	10.0	-0.6	20.0
Methylcyclohexane	Ave	0.5808	0.5790		9.97	10.0	-0.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: ICV 280-347337/17 Calibration Date: 10/20/2016 12:30

Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54

GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51

Lab File ID: P2908.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.2829	0.2895		10.2	10.0	2.3	20.0
1,4-Dioxane	Lin2		0.0007		165	200	-17.7	20.0
Dibromomethane	Ave	0.1034	0.1072		10.4	10.0	3.6	20.0
Bromodichloromethane	Ave	0.3189	0.3315		10.4	10.0	4.0	20.0
2-Chloroethyl vinyl ether	Lin1		0.0310		7.62	10.0	-23.8*	20.0
cis-1,3-Dichloropropene	Lin1		1.715		9.72	10.0	-2.8	20.0
4-Methyl-2-pentanone (MIBK)	Lin2		0.1068		38.2	40.0	-4.5	20.0
Toluene	Ave	1.299	1.355		10.4	10.0	4.3	20.0
Ethyl methacrylate	Lin2		0.7049		9.77	10.0	-2.3	20.0
trans-1,3-Dichloropropene	Lin1		0.2605		9.66	10.0	-3.4	20.0
1,1,2-Trichloroethane	Ave	0.1380	0.1421		10.3	10.0	3.0	20.0
2-Hexanone	Lin2		0.3493		39.5	40.0	-1.1	20.0
1,3-Dichloropropane	Ave	1.245	1.286		10.3	10.0	3.3	20.0
Tetrachloroethene	Ave	1.292	1.298		10.0	10.0	0.5	20.0
Dibromochloromethane	Lin1		0.7709		9.24	10.0	-7.6	20.0
1,2-Dibromoethane	Ave	0.5750	0.6187		10.8	10.0	7.6	20.0
1-Chlorohexane	Ave	2.027	2.232		11.0	10.0	10.1	20.0
Chlorobenzene	Ave	3.707	3.716	0.3000	10.0	10.0	0.2	20.0
1,1,1,2-Tetrachloroethane	Ave	1.062	1.108		10.4	10.0	4.4	20.0
Ethylbenzene	Ave	2.280	2.305		10.1	10.0	1.1	20.0
m-Xylene & p-Xylene	Ave	2.746	2.870		10.5	10.0	4.5	20.0
o-Xylene	Ave	2.513	2.670		10.6	10.0	6.3	20.0
Styrene	Ave	3.438	3.786		11.0	10.0	10.1	20.0
Bromoform	Lin1		0.2994	0.1000	8.98	10.0	-10.2	20.0
Isopropylbenzene	Ave	4.725	4.968		10.5	10.0	5.1	20.0
Cyclohexanone	Lin2		0.0150		375	400	-6.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4393	0.4711	0.3000	10.7	10.0	7.3	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1268		9.02	10.0	-9.8	20.0
1,2,3-Trichloropropane	Ave	0.1252	0.1348		10.8	10.0	7.7	20.0
N-Propylbenzene	Ave	1.299	1.400		10.8	10.0	7.7	20.0
Bromobenzene	Ave	0.8574	0.9170		10.7	10.0	6.9	20.0
1,3,5-Trimethylbenzene	Ave	3.830	4.143		10.8	10.0	8.2	20.0
2-Chlorotoluene	Ave	1.049	1.097		10.5	10.0	4.6	20.0
4-Chlorotoluene	Ave	1.049	1.111		10.6	10.0	5.9	20.0
tert-Butylbenzene	Ave	3.823	4.078		10.7	10.0	6.7	20.0
1,2,4-Trimethylbenzene	Ave	3.924	4.197		10.7	10.0	7.0	20.0
sec-Butylbenzene	Ave	1.072	1.123		10.5	10.0	4.7	20.0
4-Isopropyltoluene	Ave	4.387	4.681		10.7	10.0	6.7	20.0
1,3-Dichlorobenzene	Ave	1.927	1.988		10.3	10.0	3.2	20.0
1,4-Dichlorobenzene	Ave	1.930	1.947		10.1	10.0	0.9	20.0
n-Butylbenzene	Ave	4.702	4.965		10.6	10.0	5.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: ICV 280-347337/17 Calibration Date: 10/20/2016 12:30
 Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54
 GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51
 Lab File ID: P2908.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.570	1.642		10.5	10.0	4.6	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0557		9.04	10.0	-9.6	20.0
1,2,4-Trichlorobenzene	Ave	1.038	1.159		11.2	10.0	11.6	20.0
Hexachlorobutadiene	Ave	0.8561	0.8517		9.95	10.0	-0.5	20.0
Naphthalene	Lin1		1.442		10.0	10.0	0.0	20.0
1,2,3-Trichlorobenzene	Ave	0.7807	0.8504		10.9	10.0	8.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2746	0.2512		9.15	10.0	-8.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2911	0.2595		8.91	10.0	-10.9	20.0
Toluene-d8 (Surr)	Ave	5.455	5.124		9.39	10.0	-6.1	20.0
4-Bromofluorobenzene (Surr)	Ave	1.278	1.193		9.33	10.0	-6.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2908.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 20-Oct-2016 12:30:30 ALS Bottle#: 19 Worklist Smp#: 17
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 21-Oct-2016 15:34:57 Calib Date: 20-Oct-2016 11:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK012

First Level Reviewer: seifertj

Date: 20-Oct-2016 16:52:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.651	5.651	0.000	37	176921	250.0	250.0	
* 1 Fluorobenzene	96	7.618	7.618	0.000	97	1833301	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	90	379274	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.707	11.707	0.000	96	578591	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.074	7.074	0.000	92	368345	10.0	9.15	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.375	7.375	0.000	99	380578	10.0	8.91	
\$ 7 Toluene-d8 (Surr)	98	8.805	8.805	0.000	95	1554663	10.0	9.39	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	82	552044	10.0	9.33	
23 Dichlorodifluoromethane	85	3.887	3.887	0.000	99	571607	10.0	8.11	
26 Chloromethane	50	4.110	4.110	0.000	98	489838	10.0	8.80	
27 Vinyl chloride	62	4.264	4.264	0.000	100	434820	10.0	8.44	
29 Bromomethane	94	4.627	4.627	0.000	95	272534	10.0	8.74	
30 Chloroethane	64	4.697	4.697	0.000	97	254571	10.0	8.25	
31 Dichlorofluoromethane	67	4.865	4.865	0.000	99	742690	10.0	8.06	
32 Trichlorofluoromethane	101	4.962	4.962	0.000	99	748103	10.0	8.23	
35 Ethyl ether	59	5.102	5.102	0.000	95	252270	10.0	10.9	a
39 Acrolein	56	5.270	5.270	0.000	99	135443	100.0	112.7	
40 1,1,2-Trichloro-1,2,2-trif	151	5.367	5.367	0.000	95	408030	10.0	9.68	
41 Acetone	43	5.367	5.367	0.000	96	225069	40.0	39.0	
43 1,1-Dichloroethene	96	5.409	5.409	0.000	94	529866	10.0	10.3	
44 Iodomethane	142	5.587	5.587	0.000	98	708665	10.0	10.2	
45 Methyl acetate	43	5.608	5.608	0.000	99	604323	50.0	50.7	
47 3-Chloro-1-propene	41	5.658	5.658	0.000	88	979014	10.0	10.5	
48 Carbon disulfide	76	5.701	5.701	0.000	100	1897724	10.0	10.7	
49 2-Methyl-2-propanol	59	5.716	5.716	0.000	36	119638	100.0	117.4	
50 Methylene Chloride	84	5.766	5.766	0.000	98	445587	10.0	9.83	
51 Methyl tert-butyl ether	73	5.923	5.923	0.000	97	650769	10.0	10.5	
52 Acrylonitrile	53	5.923	5.923	0.000	84	516618	100.0	109.1	
53 trans-1,2-Dichloroethene	96	5.973	5.973	0.000	94	497001	10.0	10.1	
54 Hexane	57	6.123	6.123	0.000	95	897118	10.0	10.6	
55 Vinyl acetate	43	6.238	6.238	0.000	97	799563	20.0	19.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.295	6.295	0.000	98	933872	10.0	9.95	
61 2-Butanone (MEK)	43	6.688	6.688	0.000	99	345174	40.0	42.8	
62 sec-Butyl Alcohol	45	6.731	6.731	0.000	93	245145	300.0	317.9	
63 cis-1,2-Dichloroethene	96	6.738	6.738	0.000	91	478940	10.0	10.4	
64 2,2-Dichloropropane	77	6.760	6.760	0.000	84	637586	10.0	9.93	
67 Chlorobromomethane	128	6.938	6.938	0.000	91	153960	10.0	10.5	
68 Chloroform	83	6.946	6.946	0.000	98	825367	10.0	9.90	
69 Tetrahydrofuran	42	6.967	6.967	0.000	90	92743	20.0	20.5	
70 Isobutyl alcohol	41	7.146	7.146	0.000	42	94254	250.0	264.1	
71 1,1,1-Trichloroethane	97	7.153	7.153	0.000	97	717862	10.0	9.87	
72 Cyclohexane	56	7.224	7.224	0.000	97	1039941	10.0	10.5	
73 1,1-Dichloropropene	75	7.260	7.260	0.000	92	753782	10.0	10.1	
74 Carbon tetrachloride	117	7.296	7.296	0.000	96	673651	10.0	9.74	
76 1,2-Dichloroethane	62	7.432	7.432	0.000	98	498068	10.0	10.2	
77 Benzene	78	7.446	7.446	0.000	99	1880101	10.0	10.2	
14 n-Heptane	43	7.503	7.503	0.000	96	1034861	10.0	10.5	
79 Trichloroethene	95	7.904	7.904	0.000	94	504957	10.0	9.94	
80 2-Pentanone	43	7.961	7.961	0.000	97	756631	NC	NC	
82 Methylcyclohexane	55	8.090	8.090	0.000	96	849212	10.0	9.97	
83 1,2-Dichloropropane	63	8.097	8.097	0.000	87	424534	10.0	10.2	
84 1,4-Dioxane	88	8.147	8.147	0.000	94	21227	200.0	164.6	
85 Dibromomethane	93	8.204	8.204	0.000	90	157158	10.0	10.4	
86 Dichlorobromomethane	83	8.275	8.275	0.000	98	486214	10.0	10.4	
87 2-Chloroethyl vinyl ether	63	8.411	8.411	0.000	94	45523	10.0	7.62	
89 cis-1,3-Dichloropropene	75	8.590	8.590	0.000	89	520481	10.0	9.72	
90 4-Methyl-2-pentanone (MIBK)	43	8.647	8.647	0.000	100	626449	40.0	38.2	
91 Toluene	91	8.862	8.862	0.000	97	1987219	10.0	10.4	
92 Ethyl methacrylate	69	8.940	8.940	0.000	92	213888	10.0	9.77	
93 trans-1,3-Dichloropropene	75	8.969	8.969	0.000	98	382028	10.0	9.66	
94 1,1,2-Trichloroethane	97	9.126	9.126	0.000	95	208453	10.0	10.3	
95 2-Hexanone	43	9.234	9.234	0.000	97	423930	40.0	39.5	
96 1,3-Dichloropropane	76	9.255	9.255	0.000	96	390183	10.0	10.3	
97 Tetrachloroethene	164	9.269	9.269	0.000	93	393928	10.0	10.0	
98 Chlorodibromomethane	129	9.448	9.448	0.000	90	233894	10.0	9.24	
100 Ethylene Dibromide	107	9.577	9.577	0.000	98	187724	10.0	10.8	
101 1-Chlorohexane	91	9.791	9.791	0.000	88	677253	10.0	11.0	
102 Chlorobenzene	112	9.906	9.906	0.000	93	1127462	10.0	10.0	
103 Ethylbenzene	106	9.941	9.941	0.000	98	699446	10.0	10.1	
104 1,1,1,2-Tetrachloroethane	131	9.941	9.941	0.000	93	336283	10.0	10.4	
105 m-Xylene & p-Xylene	106	10.013	10.013	0.000	99	870767	10.0	10.5	
107 o-Xylene	106	10.328	10.328	0.000	89	810164	10.0	10.6	
106 Styrene	104	10.335	10.335	0.000	83	1148853	10.0	11.0	
108 Bromoform	173	10.542	10.542	0.000	93	90857	10.0	8.98	
109 Isopropylbenzene	105	10.585	10.585	0.000	98	2299547	10.0	10.5	
111 Cyclohexanone	55	10.735	10.735	0.000	96	181641	400.0	375.0	
112 1,1,2,2-Tetrachloroethane	83	10.807	10.807	0.000	97	218080	10.0	10.7	
113 trans-1,4-Dichloro-2-buten	53	10.842	10.842	0.000	79	58670	10.0	9.02	
114 1,2,3-Trichloropropane	110	10.878	10.878	0.000	89	62393	10.0	10.8	
115 N-Propylbenzene	120	10.907	10.907	0.000	98	647870	10.0	10.8	
116 Bromobenzene	156	10.914	10.914	0.000	97	424450	10.0	10.7	
117 1,3,5-Trimethylbenzene	105	11.014	11.014	0.000	94	1917790	10.0	10.8	
118 2-Chlorotoluene	126	11.035	11.035	0.000	95	507847	10.0	10.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.114	11.114	0.000	99	514302	10.0	10.6	
120 tert-Butylbenzene	119	11.314	11.314	0.000	92	1887435	10.0	10.7	
121 1,2,4-Trimethylbenzene	105	11.343	11.343	0.000	96	1942752	10.0	10.7	
122 sec-Butylbenzene	134	11.493	11.493	0.000	96	519627	10.0	10.5	
123 4-Isopropyltoluene	119	11.586	11.586	0.000	96	2166607	10.0	10.7	
124 1,3-Dichlorobenzene	146	11.665	11.665	0.000	95	920032	10.0	10.3	
126 1,4-Dichlorobenzene	146	11.729	11.729	0.000	91	901368	10.0	10.1	
127 n-Butylbenzene	91	11.951	11.951	0.000	99	2297937	10.0	10.6	
128 1,2-Dichlorobenzene	146	12.094	12.094	0.000	94	760047	10.0	10.5	
129 1,2-Dibromo-3-Chloropropan	157	12.852	12.852	0.000	69	25798	10.0	9.04	
130 1,2,4-Trichlorobenzene	180	13.795	13.795	0.000	93	536341	10.0	11.2	
131 Hexachlorobutadiene	225	13.931	13.931	0.000	95	394238	10.0	9.95	
132 Naphthalene	128	14.174	14.174	0.000	98	667229	10.0	10.0	
133 1,2,3-Trichlorobenzene	180	14.496	14.496	0.000	93	393642	10.0	10.9	
S 140 1,2-Dichloroethene, Total	96				0		20.0	20.6	
S 138 1,2-Dichloroethene, Total	1				0		10.0	20.6	
S 139 Xylenes, Total	106				0		20.0	21.1	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.4	
S 134 Trihalomethanes, Total	1				0		40.0	38.5	
S 135 Xylenes, Total (URS)	1				0		20.0	21.1	
S 136 Total BTEX	1				0			51.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

a - User Assigned ID

Reagents:

MV-SS 2-Cleve_00029	Amount Added: 5.00	Units: uL
MV-Gas/Ket B_00030	Amount Added: 5.00	Units: uL
MV-Main B_00016	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2908.D

Injection Date: 20-Oct-2016 12:30:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: ICV

Worklist Smp#: 17

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

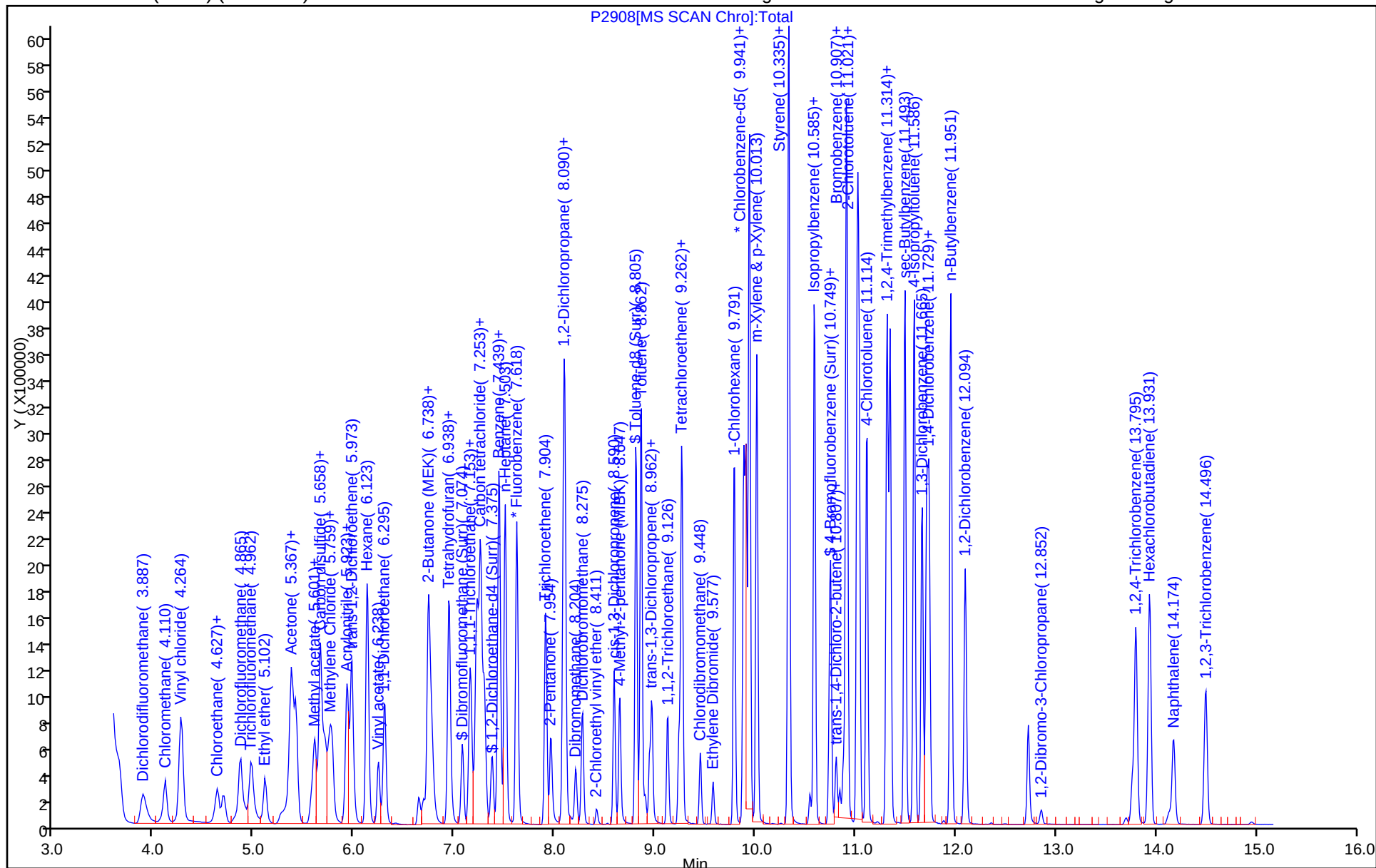
ALS Bottle#: 19

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2908.D

Injection Date: 20-Oct-2016 12:30:30

Instrument ID: VMS_P

Lims ID: ICV

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#:

19

Worklist Smp#: 17

Purge Vol: 20.000 mL

Dil. Factor:

1.0000

Method: AQ_VMSP_8260

Limit Group:

MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Detector

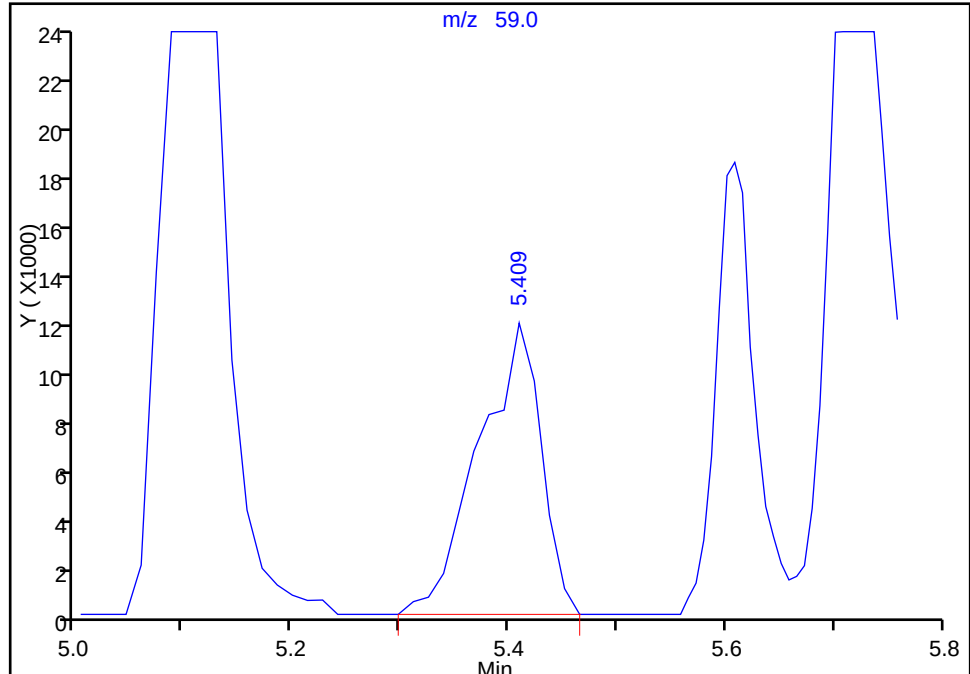
MS SCAN

35 Ethyl ether, CAS: 60-29-7

Signal: 1

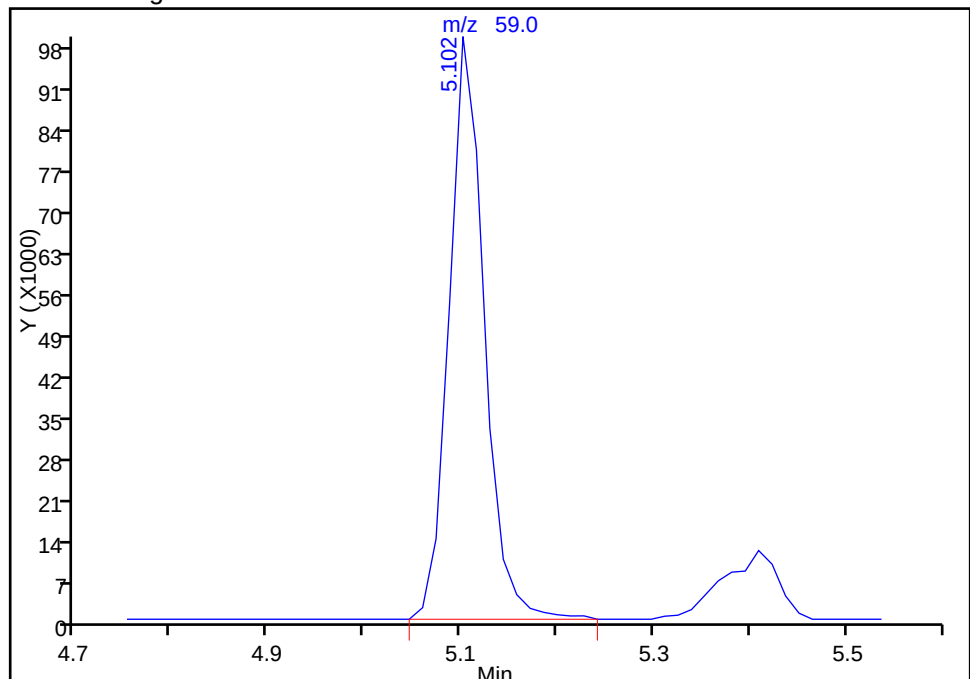
RT: 5.41
Area: 46866
Amount: 1.981808
Amount Units: ug/l

Processing Integration Results



RT: 5.10
Area: 252270
Amount: 10.885487
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 20-Oct-2016 16:48:35

Audit Action: Assigned Compound ID

Audit Reason: Wrong peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: ICV 280-350126/16 Calibration Date: 11/07/2016 13:10
 Instrument ID: VMS_P Calib Start Date: 11/07/2016 11:12
 GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 11/07/2016 12:50
 Lab File ID: P3705.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acrolein	Ave	0.0307	0.0364		119	100	18.7	20.0
Vinyl acetate	Lin2		0.5093		18.7	20.0	-6.7	20.0
2-Chloroethyl vinyl ether	Lin1		0.0709		8.20	10.0	-18.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2843	0.2875		10.1	10.0	1.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2600	0.2616		10.1	10.0	0.6	20.0
Toluene-d8 (Surr)	Ave	5.160	5.626		10.9	10.0	9.0	20.0
4-Bromofluorobenzene (Surr)	Lin2		1.091		10.0	10.0	0.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3705.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 07-Nov-2016 13:10:30 ALS Bottle#: 23 Worklist Smp#: 16
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: ICV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist:
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 07-Nov-2016 15:10:52 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK027

First Level Reviewer: seifertj

Date: 07-Nov-2016 15:09:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.658	5.658	0.000	91	117959	250.0	250.0	
* 1 Fluorobenzene	96	7.617	7.617	0.000	98	1491396	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.884	9.884	0.000	89	314676	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.707	11.707	0.000	97	432955	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.074	7.074	0.000	92	343027	10.0	10.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.374	7.374	0.000	98	312125	10.0	10.1	
\$ 7 Toluene-d8 (Surr)	98	8.811	8.811	0.000	95	1416399	10.0	10.9	
\$ 8 4-Bromofluorobenzene (Surr	95	10.749	10.749	0.000	89	377811	10.0	10.0	
39 Acrolein	56	5.269	5.269	0.000	99	434356	100.0	118.7	
55 Vinyl acetate	43	6.237	6.237	0.000	98	1215275	20.0	18.7	
87 2-Chloroethyl vinyl ether	63	8.411	8.411	0.000	93	84539	10.0	8.20	

Reagents:

MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL
MV-ARCH SS A_00074	Amount Added: 0.80	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3705.D

Injection Date: 07-Nov-2016 13:10:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: ICV

Worklist Smp#: 16

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

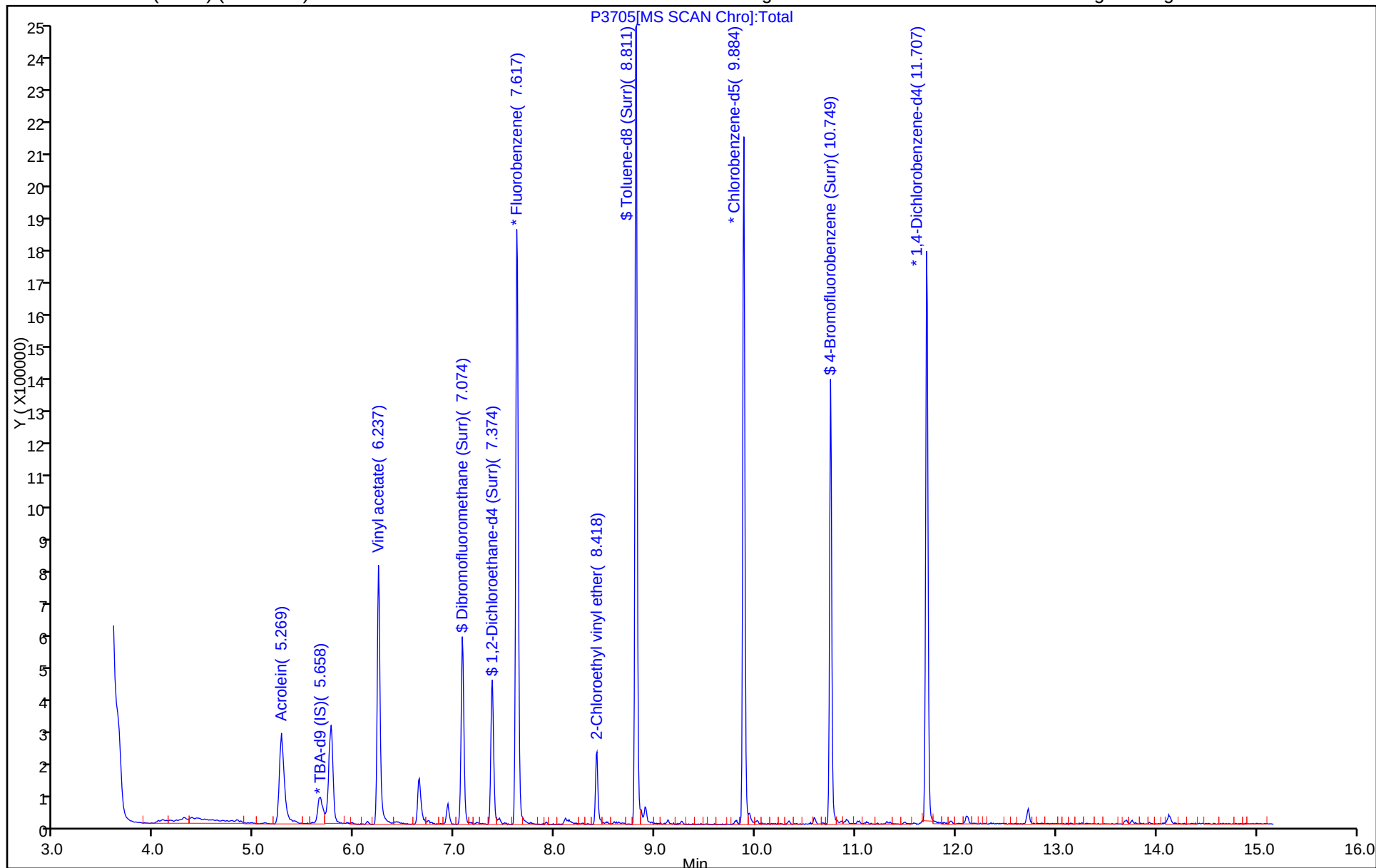
ALS Bottle#: 23

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: CCV 280-350742/2 Calibration Date: 11/10/2016 08:09
Instrument ID: VMS_P Calib Start Date: 09/16/2016 09:16
GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 09/16/2016 11:21
Lab File ID: P3844.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1383			20.0		20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3844.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 10-Nov-2016 08:09:30 ALS Bottle#: 10 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:20 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 10-Nov-2016 09:38:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.657	5.657	0.000	40	194458	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	1996904	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	88	451651	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.713	11.713	0.000	96	809933	12.5	12.5	
23 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	826426	10.0	10.8	
26 Chloromethane	50	4.112	4.112	0.000	97	480818	10.0	7.93	
27 Vinyl chloride	62	4.251	4.251	0.000	99	485630	10.0	8.66	
29 Bromomethane	94	4.628	4.628	0.000	98	371554	10.0	10.9	
30 Chloroethane	64	4.684	4.684	0.000	95	282918	10.0	8.41	
31 Dichlorofluoromethane	67	4.852	4.852	0.000	99	1079239	10.0	10.7	
32 Trichlorofluoromethane	101	4.963	4.963	0.000	99	974789	10.0	9.84	
35 Ethyl ether	59	5.103	5.103	0.000	95	275976	10.0	10.9	
39 Acrolein	56	5.271	5.271	0.000	97	484987	100.0	99.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.368	5.368	0.000	94	485344	10.0	10.6	
41 Acetone	43	5.368	5.368	0.000	36	224565	40.0	35.7	
43 1,1-Dichloroethene	96	5.410	5.410	0.000	96	603295	10.0	10.8	
44 Iodomethane	142	5.593	5.593	0.000	99	794823	10.0	10.5	
45 Methyl acetate	43	5.607	5.607	0.000	98	588972	50.0	45.4	
47 3-Chloro-1-propene	41	5.657	5.657	0.000	86	867174	10.0	8.55	
48 Carbon disulfide	76	5.700	5.700	0.000	100	2041576	10.0	10.6	
49 2-Methyl-2-propanol	59	5.714	5.714	0.000	34	111065	100.0	99.2	
50 Methylene Chloride	84	5.764	5.764	0.000	97	538438	10.0	11.0	
51 Methyl tert-butyl ether	73	5.921	5.921	0.000	95	660960	10.0	9.77	
52 Acrylonitrile	53	5.929	5.929	0.000	81	548405	100.0	106.4	
53 trans-1,2-Dichloroethene	96	5.972	5.972	0.000	96	554863	10.0	10.4	
54 Hexane	57	6.129	6.129	0.000	95	871107	10.0	8.61	
55 Vinyl acetate	43	6.236	6.236	0.000	98	1727635	20.0	19.8	
57 1,1-Dichloroethane	63	6.300	6.300	0.000	98	1013416	10.0	9.91	
61 2-Butanone (MEK)	43	6.687	6.687	0.000	99	311188	40.0	35.7	
62 sec-Butyl Alcohol	45	6.737	6.737	0.000	37	100147	150.0	118.2	
63 cis-1,2-Dichloroethene	96	6.737	6.737	0.000	87	536418	10.0	10.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
64 2,2-Dichloropropane	77	6.758	6.758	0.000	87	684992	10.0	9.79	
67 Chlorobromomethane	128	6.937	6.937	0.000	96	184328	10.0	11.6	
68 Chloroform	83	6.944	6.944	0.000	97	932000	10.0	10.3	
69 Tetrahydrofuran	42	6.973	6.973	0.000	92	76038	20.0	15.6	
70 Isobutyl alcohol	41	7.158	7.158	0.000	98	99955	250.0	254.8	M
71 1,1,1-Trichloroethane	97	7.158	7.158	0.000	96	770600	10.0	9.73	
72 Cyclohexane	56	7.223	7.223	0.000	95	1035715	10.0	9.59	
73 1,1-Dichloropropene	75	7.259	7.259	0.000	94	827271	10.0	10.2	
74 Carbon tetrachloride	117	7.287	7.287	0.000	97	783362	10.0	10.4	
76 1,2-Dichloroethane	62	7.430	7.430	0.000	97	542713	10.0	10.2	
77 Benzene	78	7.444	7.444	0.000	98	2118583	10.0	10.6	
14 n-Heptane	43	7.502	7.502	0.000	92	983683	10.0	9.19	
79 Trichloroethene	95	7.909	7.909	0.000	97	544673	10.0	9.84	
80 2-Pentanone	43	7.959	7.959	0.000	98	441755	NC	NC	
82 Methylcyclohexane	55	8.088	8.088	0.000	94	841448	10.0	9.07	
83 1,2-Dichloropropane	63	8.102	8.102	0.000	90	484434	10.0	10.7	
84 1,4-Dioxane	88	8.159	8.159	0.000	92	23065	200.0	164.3	
85 Dibromomethane	93	8.202	8.202	0.000	93	185029	10.0	11.2	
86 Dichlorobromomethane	83	8.274	8.274	0.000	98	547036	10.0	10.7	
87 2-Chloroethyl vinyl ether	63	8.417	8.417	0.000	93	138387	10.0	9.63	
89 cis-1,3-Dichloropropene	75	8.588	8.588	0.000	92	570009	10.0	8.96	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.646	0.000	99	618399	40.0	34.7	
91 Toluene	91	8.860	8.860	0.000	97	2333692	10.0	11.2	
92 Ethyl methacrylate	69	8.946	8.946	0.000	92	213128	10.0	8.26	
93 trans-1,3-Dichloropropene	75	8.967	8.967	0.000	98	447154	10.0	10.3	
94 1,1,2-Trichloroethane	97	9.125	9.125	0.000	94	248964	10.0	11.3	
95 2-Hexanone	43	9.239	9.239	0.000	98	413952	40.0	32.7	
96 1,3-Dichloropropane	76	9.261	9.261	0.000	96	471265	10.0	10.5	
97 Tetrachloroethene	164	9.268	9.268	0.000	92	478082	10.0	10.2	
98 Chlorodibromomethane	129	9.454	9.454	0.000	90	288179	10.0	9.55	
100 Ethylene Dibromide	107	9.582	9.582	0.000	96	215748	10.0	10.4	
101 1-Chlorohexane	91	9.790	9.790	0.000	88	342251	5.00	4.67	
102 Chlorobenzene	112	9.911	9.911	0.000	95	1402352	10.0	10.5	
103 Ethylbenzene	106	9.940	9.940	0.000	98	859084	10.0	10.4	
104 1,1,1,2-Tetrachloroethane	131	9.947	9.947	0.000	93	433991	10.0	11.3	
105 m-Xylene & p-Xylene	106	10.018	10.018	0.000	99	1019548	10.0	10.3	
107 o-Xylene	106	10.333	10.333	0.000	88	1012719	10.0	11.2	
106 Styrene	104	10.340	10.340	0.000	86	1354771	10.0	10.9	
108 Bromoform	173	10.548	10.548	0.000	92	115069	10.0	9.51	
109 Isopropylbenzene	105	10.590	10.590	0.000	97	2747050	10.0	8.97	
111 Cyclohexanone	55	10.741	10.741	0.000	95	202664	400.0	352.4	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.805	0.000	96	278184	10.0	9.77	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.841	0.000	82	65575	10.0	7.34	
114 1,2,3-Trichloropropane	110	10.884	10.884	0.000	89	72984	10.0	9.00	
115 N-Propylbenzene	120	10.912	10.912	0.000	99	838433	10.0	9.96	
116 Bromobenzene	156	10.919	10.919	0.000	96	551567	10.0	9.93	
117 1,3,5-Trimethylbenzene	105	11.020	11.020	0.000	95	2371598	10.0	9.56	
118 2-Chlorotoluene	126	11.034	11.034	0.000	96	680778	10.0	10.0	
119 4-Chlorotoluene	126	11.112	11.112	0.000	99	668666	10.0	9.84	
120 tert-Butylbenzene	119	11.320	11.320	0.000	93	2365467	10.0	9.55	
121 1,2,4-Trimethylbenzene	105	11.348	11.348	0.000	99	2452277	10.0	9.64	
122 sec-Butylbenzene	134	11.499	11.499	0.000	95	681109	10.0	9.81	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.584	11.584	0.000	96	2798634	10.0	9.84	
124 1,3-Dichlorobenzene	146	11.663	11.663	0.000	97	1240347	10.0	9.93	
126 1,4-Dichlorobenzene	146	11.735	11.735	0.000	93	1238806	10.0	9.91	
127 n-Butylbenzene	91	11.956	11.956	0.000	98	2954287	10.0	9.70	
128 1,2-Dichlorobenzene	146	12.099	12.099	0.000	95	1003274	10.0	9.86	
129 1,2-Dibromo-3-Chloropropan	157	12.857	12.857	0.000	78	33546	10.0	8.45	
130 1,2,4-Trichlorobenzene	180	13.801	13.801	0.000	94	666073	10.0	9.90	
131 Hexachlorobutadiene	225	13.937	13.937	0.000	96	520179	10.0	9.38	
132 Naphthalene	128	14.180	14.180	0.000	98	741224	10.0	8.05	
133 1,2,3-Trichlorobenzene	180	14.502	14.502	0.000	95	500597	10.0	9.90	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.1	
S 139 Xylenes, Total	106				0		20.0	21.4	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.3	
S 134 Trihalomethanes, Total	1				0		40.0	40.1	
S 135 Xylenes, Total (URS)	1				0		20.0	21.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MV-Main A_00027	Amount Added: 5.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3844.D

Injection Date: 10-Nov-2016 08:09:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

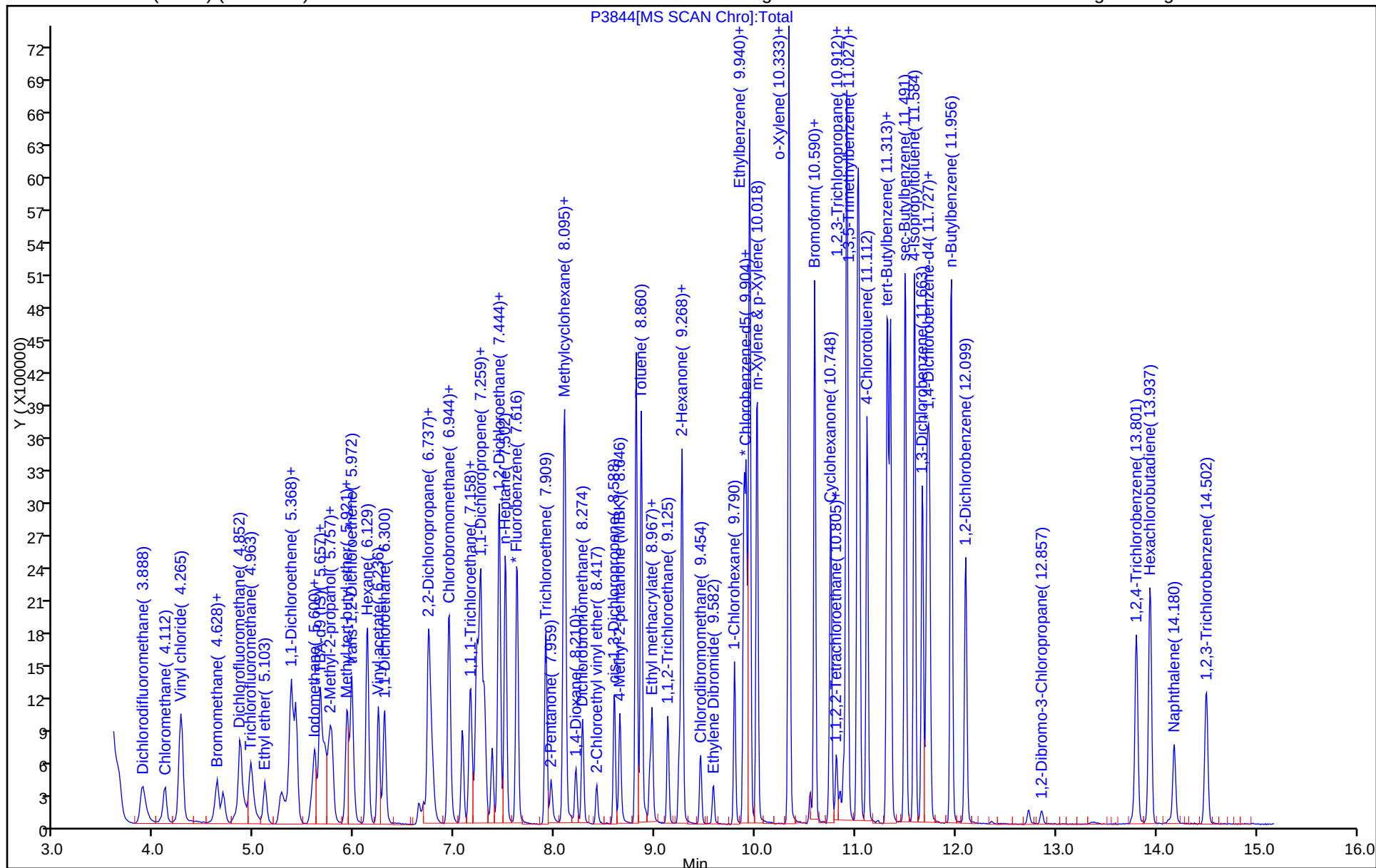
ALS Bottle#: 10

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCV 280-350742/2 Calibration Date: 11/10/2016 08:09

Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54

GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51

Lab File ID: P3844.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4808	0.5173		10.8	10.0	7.6	20.0
Chloromethane	Ave	0.3796	0.3010	0.1000	7.93	10.0	-20.7*	20.0
Vinyl chloride	Ave	0.3512	0.3040		8.66	10.0	-13.4	20.0
Bromomethane	Ave	0.2125	0.2326		10.9	10.0	9.4	20.0
Chloroethane	Ave	0.2105	0.1771		8.41	10.0	-15.9	20.0
Dichlorofluoromethane	Ave	0.6286	0.6756		10.7	10.0	7.5	20.0
Trichlorofluoromethane	Ave	0.6198	0.6102		9.84	10.0	-1.6	20.0
Ethyl ether	Ave	0.1580	0.1728		10.9	10.0	9.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2874	0.3038		10.6	10.0	5.7	20.0
Acetone	Ave	0.0394	0.0351		35.7	40.0	-10.8	20.0
1,1-Dichloroethene	Ave	0.3500	0.3776		10.8	10.0	7.9	20.0
Iodomethane	Ave	0.4756	0.4975		10.5	10.0	4.6	20.0
Methyl acetate	Ave	0.0812	0.0737		45.4	50.0	-9.2	20.0
3-Chloro-1-propene	Ave	0.6346	0.5428		8.55	10.0	-14.5	20.0
Carbon disulfide	Ave	1.204	1.278		10.6	10.0	6.1	20.0
t-Butyl alcohol	Ave	1.440	1.428		99.2	100	-0.8	20.0
Methylene Chloride	Lin1		0.3371		11.0	10.0	10.1	20.0
Methyl tert-butyl ether	Ave	0.4234	0.4137		9.77	10.0	-2.3	20.0
Acrylonitrile	Ave	0.0323	0.0343		106	100	6.4	20.0
trans-1,2-Dichloroethene	Ave	0.3344	0.3473		10.4	10.0	3.9	20.0
Hexane	Ave	2.800	2.411		8.61	10.0	-13.9	20.0
1,1-Dichloroethane	Ave	0.6401	0.6344	0.1000	9.91	10.0	-0.9	20.0
2-Butanone (MEK)	Lin2		0.0487		35.7	40.0	-10.8	20.0
cis-1,2-Dichloroethene	Ave	0.3131	0.3358		10.7	10.0	7.3	20.0
sec-Butyl Alcohol	Ave	1.090	0.8583		118	150	-21.2*	20.0
2,2-Dichloropropane	Ave	0.4380	0.4288		9.79	10.0	-2.1	20.0
Bromochloromethane	Ave	0.0998	0.1154		11.6	10.0	15.7	20.0
Chloroform	Ave	0.5682	0.5834		10.3	10.0	2.7	20.0
Tetrahydrofuran	Lin2		0.0238		15.6	20.0	-21.9*	20.0
1,1,1-Trichloroethane	Ave	0.4959	0.4824		9.73	10.0	-2.7	20.0
Isobutyl alcohol	Ave	0.5043	0.5140		255	250	1.9	20.0
Cyclohexane	Ave	0.6760	0.6483		9.59	10.0	-4.1	20.0
1,1-Dichloropropene	Ave	0.5075	0.5179		10.2	10.0	2.0	20.0
Carbon tetrachloride	Ave	0.4714	0.4904		10.4	10.0	4.0	20.0
1,2-Dichloroethane	Ave	0.3318	0.3397		10.2	10.0	2.4	20.0
Benzene	Ave	1.255	1.326		10.6	10.0	5.7	20.0
Trichloroethene	Ave	0.3464	0.3410		9.84	10.0	-1.6	20.0
Methylcyclohexane	Ave	0.5808	0.5267		9.07	10.0	-9.3	20.0
1,2-Dichloropropane	Ave	0.2829	0.3032		10.7	10.0	7.2	20.0
1,4-Dioxane	Lin2		0.0007		164	200	-17.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCV 280-350742/2 Calibration Date: 11/10/2016 08:09

Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54

GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51

Lab File ID: P3844.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.1034	0.1158		11.2	10.0	12.0	20.0
Bromodichloromethane	Ave	0.3189	0.3424		10.7	10.0	7.4	20.0
cis-1,3-Dichloropropene	Lin1		1.578		8.96	10.0	-10.4	20.0
4-Methyl-2-pentanone (MIBK)	Lin2		0.0968		34.7	40.0	-13.2	20.0
Toluene	Ave	1.299	1.461		11.2	10.0	12.5	20.0
Ethyl methacrylate	Lin2		0.5899		8.26	10.0	-17.4	20.0
trans-1,3-Dichloropropene	Lin1		0.2799		10.3	10.0	3.4	20.0
1,1,2-Trichloroethane	Ave	0.1380	0.1558		11.3	10.0	12.9	20.0
2-Hexanone	Lin2		0.2864		32.7	40.0	-18.2	20.0
1,3-Dichloropropane	Ave	1.245	1.304		10.5	10.0	4.8	20.0
Tetrachloroethene	Ave	1.292	1.323		10.2	10.0	2.4	20.0
Dibromochloromethane	Lin1		0.7976		9.55	10.0	-4.5	20.0
1,2-Dibromoethane	Ave	0.5750	0.5971		10.4	10.0	3.8	20.0
1-Chlorohexane	Ave	2.027	1.894		4.67	5.00	-6.5	20.0
Chlorobenzene	Ave	3.707	3.881	0.3000	10.5	10.0	4.7	20.0
Ethylbenzene	Ave	2.280	2.378		10.4	10.0	4.3	20.0
1,1,1,2-Tetrachloroethane	Ave	1.062	1.201		11.3	10.0	13.2	20.0
m-Xylene & p-Xylene	Ave	2.746	2.822		10.3	10.0	2.8	20.0
o-Xylene	Ave	2.513	2.803		11.2	10.0	11.5	20.0
Styrene	Ave	3.438	3.750		10.9	10.0	9.1	20.0
Bromoform	Lin1		0.3185	0.1000	9.51	10.0	-4.9	20.0
Isopropylbenzene	Ave	4.725	4.240		8.97	10.0	-10.3	20.0
Cyclohexanone	Lin2		0.0140		352	400	-11.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.4393	0.4293	0.3000	9.77	10.0	-2.3	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1012		7.34	10.0	-26.6*	20.0
1,2,3-Trichloropropane	Ave	0.1252	0.1126		9.00	10.0	-10.0	20.0
N-Propylbenzene	Ave	1.299	1.294		9.96	10.0	-0.4	20.0
Bromobenzene	Ave	0.8574	0.8513		9.93	10.0	-0.7	20.0
1,3,5-Trimethylbenzene	Ave	3.830	3.660		9.56	10.0	-4.4	20.0
2-Chlorotoluene	Ave	1.049	1.051		10.0	10.0	0.2	20.0
4-Chlorotoluene	Ave	1.049	1.032		9.84	10.0	-1.6	20.0
tert-Butylbenzene	Ave	3.823	3.651		9.55	10.0	-4.5	20.0
1,2,4-Trimethylbenzene	Ave	3.924	3.785		9.64	10.0	-3.6	20.0
sec-Butylbenzene	Ave	1.072	1.051		9.81	10.0	-1.9	20.0
4-Isopropyltoluene	Ave	4.387	4.319		9.84	10.0	-1.6	20.0
1,3-Dichlorobenzene	Ave	1.927	1.914		9.93	10.0	-0.7	20.0
1,4-Dichlorobenzene	Ave	1.930	1.912		9.91	10.0	-0.9	20.0
n-Butylbenzene	Ave	4.702	4.559		9.70	10.0	-3.0	20.0
1,2-Dichlorobenzene	Ave	1.570	1.548		9.86	10.0	-1.4	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0518		8.45	10.0	-15.5	20.0
1,2,4-Trichlorobenzene	Ave	1.038	1.028		9.90	10.0	-1.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: CCV 280-350742/2 Calibration Date: 11/10/2016 08:09
Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54
GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51
Lab File ID: P3844.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobutadiene	Ave	0.8561	0.8028		9.38	10.0	-6.2	20.0
Naphthalene	Lin1		1.144		8.05	10.0	-19.5	20.0
1,2,3-Trichlorobenzene	Ave	0.7807	0.7726		9.90	10.0	-1.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3844.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 10-Nov-2016 08:09:30 ALS Bottle#: 10 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:20 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 10-Nov-2016 09:38:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.657	5.657	0.000	40	194458	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	1996904	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	88	451651	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.713	11.713	0.000	96	809933	12.5	12.5	
23 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	826426	10.0	10.8	
26 Chloromethane	50	4.112	4.112	0.000	97	480818	10.0	7.93	
27 Vinyl chloride	62	4.251	4.251	0.000	99	485630	10.0	8.66	
29 Bromomethane	94	4.628	4.628	0.000	98	371554	10.0	10.9	
30 Chloroethane	64	4.684	4.684	0.000	95	282918	10.0	8.41	
31 Dichlorofluoromethane	67	4.852	4.852	0.000	99	1079239	10.0	10.7	
32 Trichlorofluoromethane	101	4.963	4.963	0.000	99	974789	10.0	9.84	
35 Ethyl ether	59	5.103	5.103	0.000	95	275976	10.0	10.9	
39 Acrolein	56	5.271	5.271	0.000	97	484987	100.0	99.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.368	5.368	0.000	94	485344	10.0	10.6	
41 Acetone	43	5.368	5.368	0.000	36	224565	40.0	35.7	
43 1,1-Dichloroethene	96	5.410	5.410	0.000	96	603295	10.0	10.8	
44 Iodomethane	142	5.593	5.593	0.000	99	794823	10.0	10.5	
45 Methyl acetate	43	5.607	5.607	0.000	98	588972	50.0	45.4	
47 3-Chloro-1-propene	41	5.657	5.657	0.000	86	867174	10.0	8.55	
48 Carbon disulfide	76	5.700	5.700	0.000	100	2041576	10.0	10.6	
49 2-Methyl-2-propanol	59	5.714	5.714	0.000	34	111065	100.0	99.2	
50 Methylene Chloride	84	5.764	5.764	0.000	97	538438	10.0	11.0	
51 Methyl tert-butyl ether	73	5.921	5.921	0.000	95	660960	10.0	9.77	
52 Acrylonitrile	53	5.929	5.929	0.000	81	548405	100.0	106.4	
53 trans-1,2-Dichloroethene	96	5.972	5.972	0.000	96	554863	10.0	10.4	
54 Hexane	57	6.129	6.129	0.000	95	871107	10.0	8.61	
55 Vinyl acetate	43	6.236	6.236	0.000	98	1727635	20.0	19.8	
57 1,1-Dichloroethane	63	6.300	6.300	0.000	98	1013416	10.0	9.91	
61 2-Butanone (MEK)	43	6.687	6.687	0.000	99	311188	40.0	35.7	
62 sec-Butyl Alcohol	45	6.737	6.737	0.000	37	100147	150.0	118.2	
63 cis-1,2-Dichloroethene	96	6.737	6.737	0.000	87	536418	10.0	10.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
64 2,2-Dichloropropane	77	6.758	6.758	0.000	87	684992	10.0	9.79	
67 Chlorobromomethane	128	6.937	6.937	0.000	96	184328	10.0	11.6	
68 Chloroform	83	6.944	6.944	0.000	97	932000	10.0	10.3	
69 Tetrahydrofuran	42	6.973	6.973	0.000	92	76038	20.0	15.6	
70 Isobutyl alcohol	41	7.158	7.158	0.000	98	99955	250.0	254.8	M
71 1,1,1-Trichloroethane	97	7.158	7.158	0.000	96	770600	10.0	9.73	
72 Cyclohexane	56	7.223	7.223	0.000	95	1035715	10.0	9.59	
73 1,1-Dichloropropene	75	7.259	7.259	0.000	94	827271	10.0	10.2	
74 Carbon tetrachloride	117	7.287	7.287	0.000	97	783362	10.0	10.4	
76 1,2-Dichloroethane	62	7.430	7.430	0.000	97	542713	10.0	10.2	
77 Benzene	78	7.444	7.444	0.000	98	2118583	10.0	10.6	
14 n-Heptane	43	7.502	7.502	0.000	92	983683	10.0	9.19	
79 Trichloroethene	95	7.909	7.909	0.000	97	544673	10.0	9.84	
80 2-Pentanone	43	7.959	7.959	0.000	98	441755	NC	NC	
82 Methylcyclohexane	55	8.088	8.088	0.000	94	841448	10.0	9.07	
83 1,2-Dichloropropane	63	8.102	8.102	0.000	90	484434	10.0	10.7	
84 1,4-Dioxane	88	8.159	8.159	0.000	92	23065	200.0	164.3	
85 Dibromomethane	93	8.202	8.202	0.000	93	185029	10.0	11.2	
86 Dichlorobromomethane	83	8.274	8.274	0.000	98	547036	10.0	10.7	
87 2-Chloroethyl vinyl ether	63	8.417	8.417	0.000	93	138387	10.0	9.63	
89 cis-1,3-Dichloropropene	75	8.588	8.588	0.000	92	570009	10.0	8.96	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.646	0.000	99	618399	40.0	34.7	
91 Toluene	91	8.860	8.860	0.000	97	2333692	10.0	11.2	
92 Ethyl methacrylate	69	8.946	8.946	0.000	92	213128	10.0	8.26	
93 trans-1,3-Dichloropropene	75	8.967	8.967	0.000	98	447154	10.0	10.3	
94 1,1,2-Trichloroethane	97	9.125	9.125	0.000	94	248964	10.0	11.3	
95 2-Hexanone	43	9.239	9.239	0.000	98	413952	40.0	32.7	
96 1,3-Dichloropropane	76	9.261	9.261	0.000	96	471265	10.0	10.5	
97 Tetrachloroethene	164	9.268	9.268	0.000	92	478082	10.0	10.2	
98 Chlorodibromomethane	129	9.454	9.454	0.000	90	288179	10.0	9.55	
100 Ethylene Dibromide	107	9.582	9.582	0.000	96	215748	10.0	10.4	
101 1-Chlorohexane	91	9.790	9.790	0.000	88	342251	5.00	4.67	
102 Chlorobenzene	112	9.911	9.911	0.000	95	1402352	10.0	10.5	
103 Ethylbenzene	106	9.940	9.940	0.000	98	859084	10.0	10.4	
104 1,1,1,2-Tetrachloroethane	131	9.947	9.947	0.000	93	433991	10.0	11.3	
105 m-Xylene & p-Xylene	106	10.018	10.018	0.000	99	1019548	10.0	10.3	
107 o-Xylene	106	10.333	10.333	0.000	88	1012719	10.0	11.2	
106 Styrene	104	10.340	10.340	0.000	86	1354771	10.0	10.9	
108 Bromoform	173	10.548	10.548	0.000	92	115069	10.0	9.51	
109 Isopropylbenzene	105	10.590	10.590	0.000	97	2747050	10.0	8.97	
111 Cyclohexanone	55	10.741	10.741	0.000	95	202664	400.0	352.4	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.805	0.000	96	278184	10.0	9.77	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.841	0.000	82	65575	10.0	7.34	
114 1,2,3-Trichloropropane	110	10.884	10.884	0.000	89	72984	10.0	9.00	
115 N-Propylbenzene	120	10.912	10.912	0.000	99	838433	10.0	9.96	
116 Bromobenzene	156	10.919	10.919	0.000	96	551567	10.0	9.93	
117 1,3,5-Trimethylbenzene	105	11.020	11.020	0.000	95	2371598	10.0	9.56	
118 2-Chlorotoluene	126	11.034	11.034	0.000	96	680778	10.0	10.0	
119 4-Chlorotoluene	126	11.112	11.112	0.000	99	668666	10.0	9.84	
120 tert-Butylbenzene	119	11.320	11.320	0.000	93	2365467	10.0	9.55	
121 1,2,4-Trimethylbenzene	105	11.348	11.348	0.000	99	2452277	10.0	9.64	
122 sec-Butylbenzene	134	11.499	11.499	0.000	95	681109	10.0	9.81	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.584	11.584	0.000	96	2798634	10.0	9.84	
124 1,3-Dichlorobenzene	146	11.663	11.663	0.000	97	1240347	10.0	9.93	
126 1,4-Dichlorobenzene	146	11.735	11.735	0.000	93	1238806	10.0	9.91	
127 n-Butylbenzene	91	11.956	11.956	0.000	98	2954287	10.0	9.70	
128 1,2-Dichlorobenzene	146	12.099	12.099	0.000	95	1003274	10.0	9.86	
129 1,2-Dibromo-3-Chloropropan	157	12.857	12.857	0.000	78	33546	10.0	8.45	
130 1,2,4-Trichlorobenzene	180	13.801	13.801	0.000	94	666073	10.0	9.90	
131 Hexachlorobutadiene	225	13.937	13.937	0.000	96	520179	10.0	9.38	
132 Naphthalene	128	14.180	14.180	0.000	98	741224	10.0	8.05	
133 1,2,3-Trichlorobenzene	180	14.502	14.502	0.000	95	500597	10.0	9.90	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.1	
S 139 Xylenes, Total	106				0		20.0	21.4	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.3	
S 134 Trihalomethanes, Total	1				0		40.0	40.1	
S 135 Xylenes, Total (URS)	1				0		20.0	21.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MV-Main A_00027	Amount Added: 5.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3844.D

Injection Date: 10-Nov-2016 08:09:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

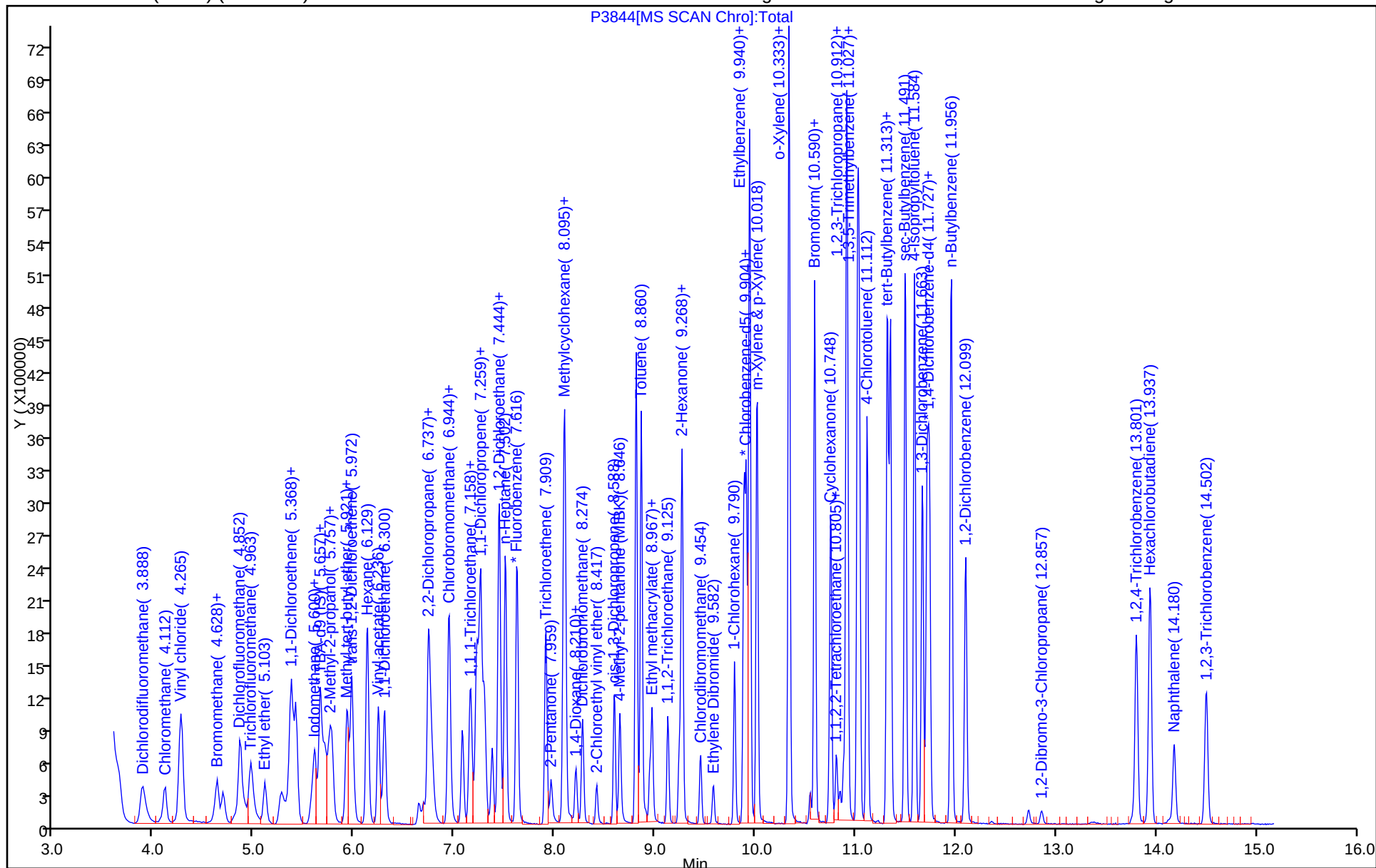
ALS Bottle#: 10

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

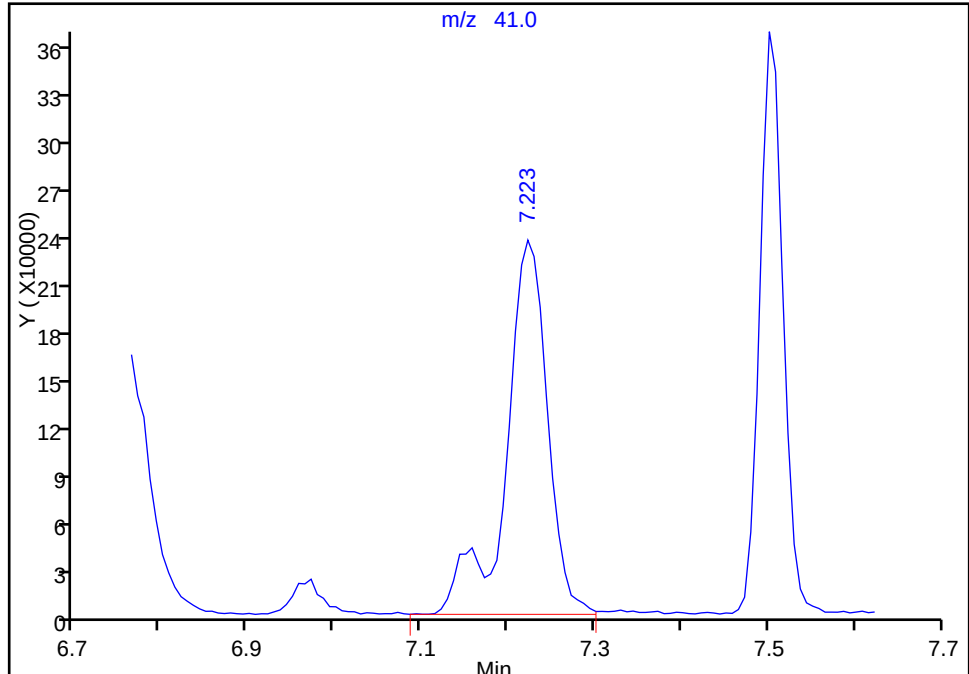
Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3844.D
Injection Date: 10-Nov-2016 08:09:30 Instrument ID: VMS_P
Lims ID: CCV
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector: MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

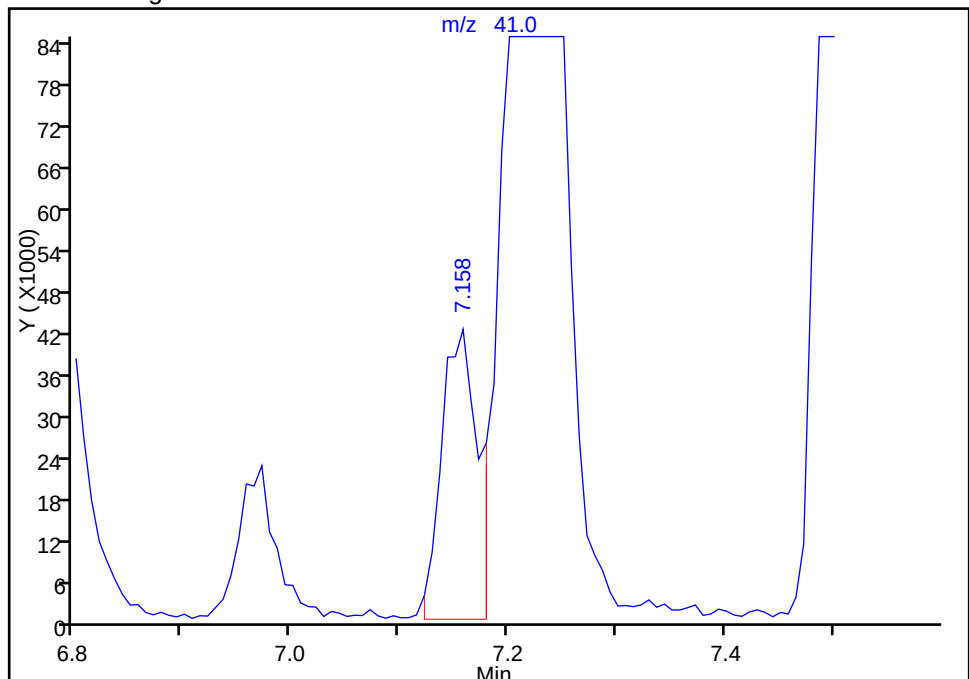
RT: 7.22
Area: 787761
Amount: 2008.2584
Amount Units: ug/l

Processing Integration Results



RT: 7.16
Area: 99955
Amount: 254.8177
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 10-Nov-2016 09:38:13

Audit Action: Manually Integrated

Audit Reason: Wrong peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: CCV 280-350742/2 Calibration Date: 11/10/2016 08:09
Instrument ID: VMS_P Calib Start Date: 11/07/2016 11:12
GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 11/07/2016 12:50
Lab File ID: P3844.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acrolein	Ave	0.0307	0.0304		99.0	100	-1.0	20.0
Vinyl acetate	Lin2		0.5407		19.8	20.0	-1.2	20.0
2-Chloroethyl vinyl ether	Lin1		0.0866		9.63	10.0	-3.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3844.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 10-Nov-2016 08:09:30 ALS Bottle#: 10 Worklist Smp#: 2
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub70
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:20 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 10-Nov-2016 09:38:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.657	5.657	0.000	40	194458	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	1996904	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	88	451651	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.713	11.713	0.000	96	809933	12.5	12.5	
23 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	826426	10.0	10.8	
26 Chloromethane	50	4.112	4.112	0.000	97	480818	10.0	7.93	
27 Vinyl chloride	62	4.251	4.251	0.000	99	485630	10.0	8.66	
29 Bromomethane	94	4.628	4.628	0.000	98	371554	10.0	10.9	
30 Chloroethane	64	4.684	4.684	0.000	95	282918	10.0	8.41	
31 Dichlorofluoromethane	67	4.852	4.852	0.000	99	1079239	10.0	10.7	
32 Trichlorofluoromethane	101	4.963	4.963	0.000	99	974789	10.0	9.84	
35 Ethyl ether	59	5.103	5.103	0.000	95	275976	10.0	10.9	
39 Acrolein	56	5.271	5.271	0.000	97	484987	100.0	99.0	
40 1,1,2-Trichloro-1,2,2-trif	151	5.368	5.368	0.000	94	485344	10.0	10.6	
41 Acetone	43	5.368	5.368	0.000	36	224565	40.0	35.7	
43 1,1-Dichloroethene	96	5.410	5.410	0.000	96	603295	10.0	10.8	
44 Iodomethane	142	5.593	5.593	0.000	99	794823	10.0	10.5	
45 Methyl acetate	43	5.607	5.607	0.000	98	588972	50.0	45.4	
47 3-Chloro-1-propene	41	5.657	5.657	0.000	86	867174	10.0	8.55	
48 Carbon disulfide	76	5.700	5.700	0.000	100	2041576	10.0	10.6	
49 2-Methyl-2-propanol	59	5.714	5.714	0.000	34	111065	100.0	99.2	
50 Methylene Chloride	84	5.764	5.764	0.000	97	538438	10.0	11.0	
51 Methyl tert-butyl ether	73	5.921	5.921	0.000	95	660960	10.0	9.77	
52 Acrylonitrile	53	5.929	5.929	0.000	81	548405	100.0	106.4	
53 trans-1,2-Dichloroethene	96	5.972	5.972	0.000	96	554863	10.0	10.4	
54 Hexane	57	6.129	6.129	0.000	95	871107	10.0	8.61	
55 Vinyl acetate	43	6.236	6.236	0.000	98	1727635	20.0	19.8	
57 1,1-Dichloroethane	63	6.300	6.300	0.000	98	1013416	10.0	9.91	
61 2-Butanone (MEK)	43	6.687	6.687	0.000	99	311188	40.0	35.7	
62 sec-Butyl Alcohol	45	6.737	6.737	0.000	37	100147	150.0	118.2	
63 cis-1,2-Dichloroethene	96	6.737	6.737	0.000	87	536418	10.0	10.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
64 2,2-Dichloropropane	77	6.758	6.758	0.000	87	684992	10.0	9.79	
67 Chlorobromomethane	128	6.937	6.937	0.000	96	184328	10.0	11.6	
68 Chloroform	83	6.944	6.944	0.000	97	932000	10.0	10.3	
69 Tetrahydrofuran	42	6.973	6.973	0.000	92	76038	20.0	15.6	
70 Isobutyl alcohol	41	7.158	7.158	0.000	98	99955	250.0	254.8	M
71 1,1,1-Trichloroethane	97	7.158	7.158	0.000	96	770600	10.0	9.73	
72 Cyclohexane	56	7.223	7.223	0.000	95	1035715	10.0	9.59	
73 1,1-Dichloropropene	75	7.259	7.259	0.000	94	827271	10.0	10.2	
74 Carbon tetrachloride	117	7.287	7.287	0.000	97	783362	10.0	10.4	
76 1,2-Dichloroethane	62	7.430	7.430	0.000	97	542713	10.0	10.2	
77 Benzene	78	7.444	7.444	0.000	98	2118583	10.0	10.6	
14 n-Heptane	43	7.502	7.502	0.000	92	983683	10.0	9.19	
79 Trichloroethene	95	7.909	7.909	0.000	97	544673	10.0	9.84	
80 2-Pentanone	43	7.959	7.959	0.000	98	441755	NC	NC	
82 Methylcyclohexane	55	8.088	8.088	0.000	94	841448	10.0	9.07	
83 1,2-Dichloropropane	63	8.102	8.102	0.000	90	484434	10.0	10.7	
84 1,4-Dioxane	88	8.159	8.159	0.000	92	23065	200.0	164.3	
85 Dibromomethane	93	8.202	8.202	0.000	93	185029	10.0	11.2	
86 Dichlorobromomethane	83	8.274	8.274	0.000	98	547036	10.0	10.7	
87 2-Chloroethyl vinyl ether	63	8.417	8.417	0.000	93	138387	10.0	9.63	
89 cis-1,3-Dichloropropene	75	8.588	8.588	0.000	92	570009	10.0	8.96	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.646	0.000	99	618399	40.0	34.7	
91 Toluene	91	8.860	8.860	0.000	97	2333692	10.0	11.2	
92 Ethyl methacrylate	69	8.946	8.946	0.000	92	213128	10.0	8.26	
93 trans-1,3-Dichloropropene	75	8.967	8.967	0.000	98	447154	10.0	10.3	
94 1,1,2-Trichloroethane	97	9.125	9.125	0.000	94	248964	10.0	11.3	
95 2-Hexanone	43	9.239	9.239	0.000	98	413952	40.0	32.7	
96 1,3-Dichloropropane	76	9.261	9.261	0.000	96	471265	10.0	10.5	
97 Tetrachloroethene	164	9.268	9.268	0.000	92	478082	10.0	10.2	
98 Chlorodibromomethane	129	9.454	9.454	0.000	90	288179	10.0	9.55	
100 Ethylene Dibromide	107	9.582	9.582	0.000	96	215748	10.0	10.4	
101 1-Chlorohexane	91	9.790	9.790	0.000	88	342251	5.00	4.67	
102 Chlorobenzene	112	9.911	9.911	0.000	95	1402352	10.0	10.5	
103 Ethylbenzene	106	9.940	9.940	0.000	98	859084	10.0	10.4	
104 1,1,1,2-Tetrachloroethane	131	9.947	9.947	0.000	93	433991	10.0	11.3	
105 m-Xylene & p-Xylene	106	10.018	10.018	0.000	99	1019548	10.0	10.3	
107 o-Xylene	106	10.333	10.333	0.000	88	1012719	10.0	11.2	
106 Styrene	104	10.340	10.340	0.000	86	1354771	10.0	10.9	
108 Bromoform	173	10.548	10.548	0.000	92	115069	10.0	9.51	
109 Isopropylbenzene	105	10.590	10.590	0.000	97	2747050	10.0	8.97	
111 Cyclohexanone	55	10.741	10.741	0.000	95	202664	400.0	352.4	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.805	0.000	96	278184	10.0	9.77	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.841	0.000	82	65575	10.0	7.34	
114 1,2,3-Trichloropropane	110	10.884	10.884	0.000	89	72984	10.0	9.00	
115 N-Propylbenzene	120	10.912	10.912	0.000	99	838433	10.0	9.96	
116 Bromobenzene	156	10.919	10.919	0.000	96	551567	10.0	9.93	
117 1,3,5-Trimethylbenzene	105	11.020	11.020	0.000	95	2371598	10.0	9.56	
118 2-Chlorotoluene	126	11.034	11.034	0.000	96	680778	10.0	10.0	
119 4-Chlorotoluene	126	11.112	11.112	0.000	99	668666	10.0	9.84	
120 tert-Butylbenzene	119	11.320	11.320	0.000	93	2365467	10.0	9.55	
121 1,2,4-Trimethylbenzene	105	11.348	11.348	0.000	99	2452277	10.0	9.64	
122 sec-Butylbenzene	134	11.499	11.499	0.000	95	681109	10.0	9.81	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 4-Isopropyltoluene	119	11.584	11.584	0.000	96	2798634	10.0	9.84	
124 1,3-Dichlorobenzene	146	11.663	11.663	0.000	97	1240347	10.0	9.93	
126 1,4-Dichlorobenzene	146	11.735	11.735	0.000	93	1238806	10.0	9.91	
127 n-Butylbenzene	91	11.956	11.956	0.000	98	2954287	10.0	9.70	
128 1,2-Dichlorobenzene	146	12.099	12.099	0.000	95	1003274	10.0	9.86	
129 1,2-Dibromo-3-Chloropropan	157	12.857	12.857	0.000	78	33546	10.0	8.45	
130 1,2,4-Trichlorobenzene	180	13.801	13.801	0.000	94	666073	10.0	9.90	
131 Hexachlorobutadiene	225	13.937	13.937	0.000	96	520179	10.0	9.38	
132 Naphthalene	128	14.180	14.180	0.000	98	741224	10.0	8.05	
133 1,2,3-Trichlorobenzene	180	14.502	14.502	0.000	95	500597	10.0	9.90	
S 140 1,2-Dichloroethene, Total	96				0		20.0	21.1	
S 138 1,2-Dichloroethene, Total	1				0		20.0	21.1	
S 139 Xylenes, Total	106				0		20.0	21.4	
S 137 1,3-Dichloropropene, Total	1				0		20.0	19.3	
S 134 Trihalomethanes, Total	1				0		40.0	40.1	
S 135 Xylenes, Total (URS)	1				0		20.0	21.4	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MV-Main A_00027	Amount Added: 5.00	Units: uL
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL
MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL
MV-567649-D_00001	Amount Added: 1.00	Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3844.D

Injection Date: 10-Nov-2016 08:09:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCV

Worklist Smp#: 2

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

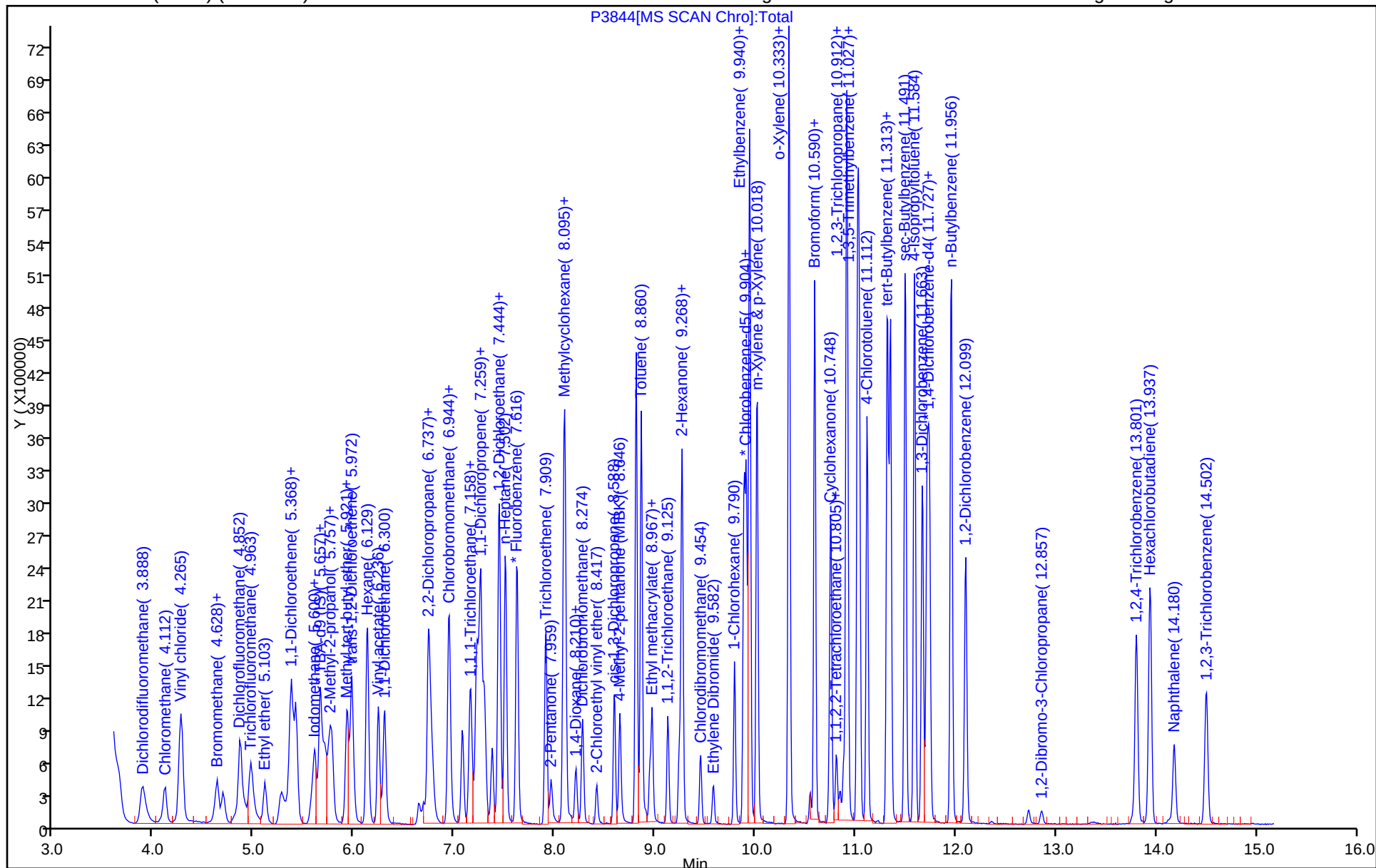
ALS Bottle#: 10

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: CCV 280-350742/3 Calibration Date: 11/10/2016 08:29
 Instrument ID: VMS_P Calib Start Date: 09/13/2016 12:16
 GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 09/13/2016 13:53
 Lab File ID: P3845.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethanol	Ave	0.2164	0.2513		465	400	16.2	20.0
Isopropyl alcohol	Ave	1.301	0.9880		76.0	100	-24.0*	20.0
Acetonitrile	Lin1		0.0105		78.5	100	-21.5*	20.0
Isopropyl ether	Ave	0.1949	0.1785		9.16	10.0	-8.4	20.0
2-Chloro-1,3-butadiene	Ave	0.6473	0.4599		7.10	10.0	-29.0*	20.0
Tert-butyl ethyl ether	Ave	0.6289	0.5482		8.72	10.0	-12.8	20.0
Ethyl acetate	Ave	0.1084	0.0905		16.7	20.0	-16.5	20.0
Propionitrile	Ave	0.0113	0.0114		101	100	0.9	20.0
Methacrylonitrile	Ave	0.0796	0.0632		79.4	100	-20.6*	20.0
Tert-amyl methyl ether	Ave	0.4073	0.4005		9.83	10.0	-1.7	20.0
n-Butanol	Lin		0.3048		236	250	-5.7	20.0
Methyl methacrylate	Lin2		0.0184		17.9	20.0	-10.6	20.0
2-Nitropropane	Lin1		0.0153		29.6	20.0	47.9*	20.0
cis-1,4-Dichloro-2-butene	Lin2		0.0995		14.4	20.0	-28.2*	20.0
1,2,3-Trimethylbenzene	Ave	3.577	3.398		9.50	10.0	-5.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3845.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 10-Nov-2016 08:29:30 ALS Bottle#: 11 Worklist Smp#: 3
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:22 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 10-Nov-2016 09:39:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.643	5.643	0.000	94	197363	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	2011974	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	90	440547	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.713	11.713	0.000	97	637409	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	92	490343	11.5	10.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.366	0.000	99	452169	11.5	10.8	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.803	0.000	96	2001157	11.5	11.0	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	610258	11.5	10.9	
28 Ethylene oxide	43	4.574	4.574	0.000	98	880694	1000.0	738.7	
33 Ethanol	45	4.979	4.979	0.000	53	79361	400.0	464.6	
38 Propene oxide	58	5.217	5.217	0.000	96	3810788	1000.0	979.7	
42 Isopropyl alcohol	45	5.384	5.384	0.000	89	77998	100.0	76.0	
46 Acetonitrile	41	5.621	5.621	0.000	96	169030	100.0	78.5	
56 Isopropyl ether	87	6.236	6.236	0.000	91	287255	10.0	9.16	
58 2-Chloro-1,3-butadiene	53	6.358	6.358	0.000	95	740204	10.0	7.10	
59 Tert-butyl ethyl ether	59	6.515	6.515	0.000	96	882377	10.0	8.72	
60 Ethyl acetate	43	6.672	6.672	0.000	99	291463	20.0	16.7	
65 Propionitrile	54	6.758	6.758	0.000	98	182987	100.0	100.9	
66 Methacrylonitrile	41	6.873	6.873	0.000	95	1016594	100.0	79.4	
75 Tert-amyl methyl ether	73	7.423	7.423	0.000	90	644645	10.0	9.83	
78 n-Butanol	56	7.659	7.659	0.000	89	60157	250.0	235.9	
81 Methyl methacrylate	100	8.045	8.045	0.000	92	59209	20.0	17.9	
88 2-Nitropropane	41	8.424	8.424	0.000	95	49134	20.0	29.6	
99 Tetrahydrothiophene	60		9.497				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.626	10.626	0.000	97	101499	20.0	14.4	
125 1,2,3-Trimethylbenzene	105	11.728	11.728	0.000	98	1732602	10.0	9.50	
16 1,3,5-Trichlorobenzene	180	13.050	13.050	0.000	95	700104	10.0	10.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 5.00	Units: uL	
MV-567649-D_00001	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.92	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3845.D

Injection Date: 10-Nov-2016 08:29:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

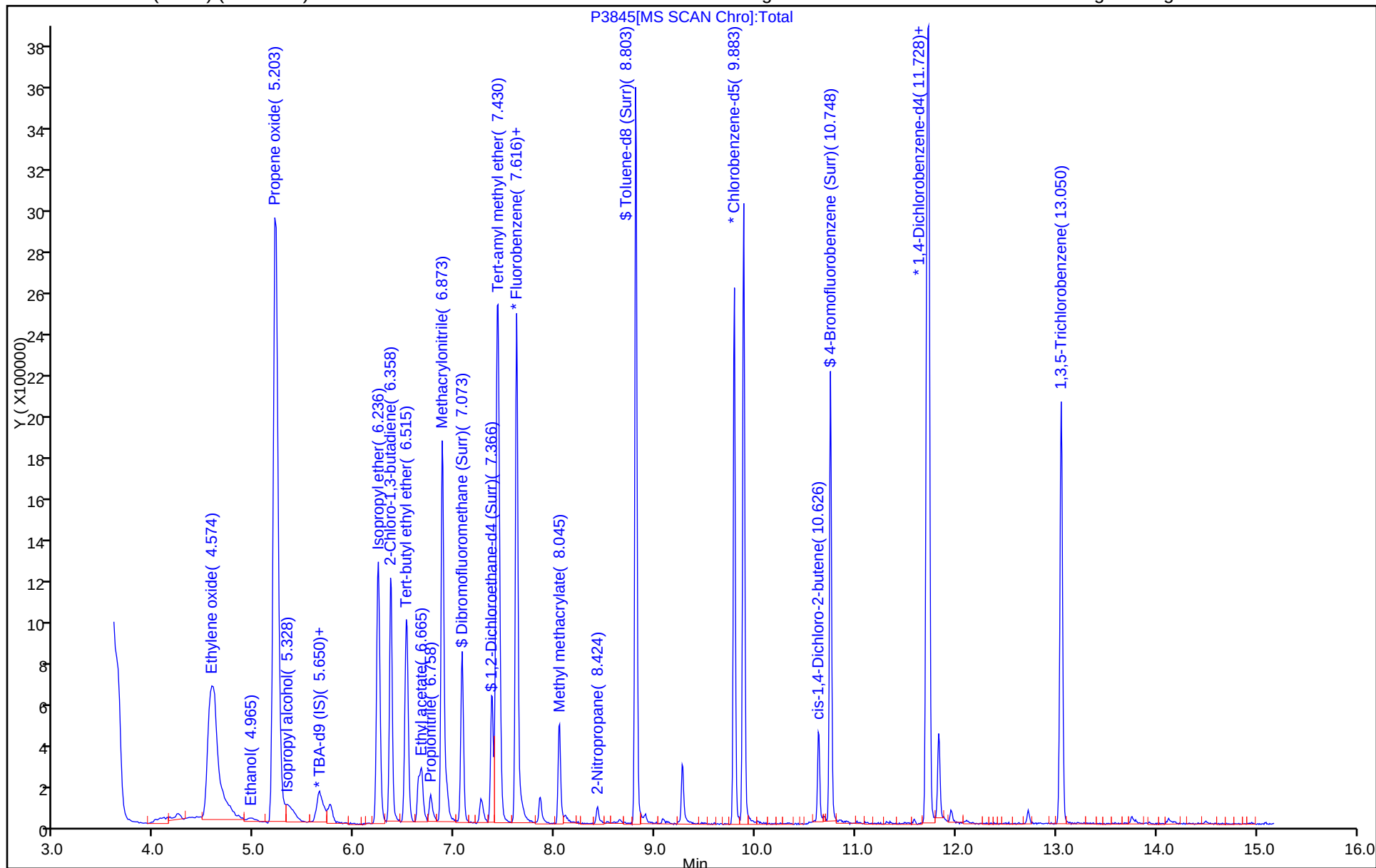
ALS Bottle#: 11

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: CCV 280-350742/3 Calibration Date: 11/10/2016 08:29
Instrument ID: VMS_P Calib Start Date: 11/07/2016 11:12
GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 11/07/2016 12:50
Lab File ID: P3845.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2843	0.2649		10.7	11.5	-6.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2600	0.2443		10.8	11.5	-6.0	20.0
Toluene-d8 (Surr)	Ave	5.160	4.937		11.0	11.5	-4.3	20.0
4-Bromofluorobenzene (Surr)	Lin2		1.041		10.9	11.5	-5.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3845.D
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 10-Nov-2016 08:29:30 ALS Bottle#: 11 Worklist Smp#: 3
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCV
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub114
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:22 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 10-Nov-2016 09:39:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.643	5.643	0.000	94	197363	250.0	250.0	
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	2011974	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	90	440547	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.713	11.713	0.000	97	637409	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	92	490343	11.5	10.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.366	0.000	99	452169	11.5	10.8	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.803	0.000	96	2001157	11.5	11.0	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	610258	11.5	10.9	
28 Ethylene oxide	43	4.574	4.574	0.000	98	880694	1000.0	738.7	
33 Ethanol	45	4.979	4.979	0.000	53	79361	400.0	464.6	
38 Propene oxide	58	5.217	5.217	0.000	96	3810788	1000.0	979.7	
42 Isopropyl alcohol	45	5.384	5.384	0.000	89	77998	100.0	76.0	
46 Acetonitrile	41	5.621	5.621	0.000	96	169030	100.0	78.5	
56 Isopropyl ether	87	6.236	6.236	0.000	91	287255	10.0	9.16	
58 2-Chloro-1,3-butadiene	53	6.358	6.358	0.000	95	740204	10.0	7.10	
59 Tert-butyl ethyl ether	59	6.515	6.515	0.000	96	882377	10.0	8.72	
60 Ethyl acetate	43	6.672	6.672	0.000	99	291463	20.0	16.7	
65 Propionitrile	54	6.758	6.758	0.000	98	182987	100.0	100.9	
66 Methacrylonitrile	41	6.873	6.873	0.000	95	1016594	100.0	79.4	
75 Tert-amyl methyl ether	73	7.423	7.423	0.000	90	644645	10.0	9.83	
78 n-Butanol	56	7.659	7.659	0.000	89	60157	250.0	235.9	
81 Methyl methacrylate	100	8.045	8.045	0.000	92	59209	20.0	17.9	
88 2-Nitropropane	41	8.424	8.424	0.000	95	49134	20.0	29.6	
99 Tetrahydrothiophene	60		9.497				ND	ND	
110 cis-1,4-Dichloro-2-butene	53	10.626	10.626	0.000	97	101499	20.0	14.4	
125 1,2,3-Trimethylbenzene	105	11.728	11.728	0.000	98	1732602	10.0	9.50	
16 1,3,5-Trichlorobenzene	180	13.050	13.050	0.000	95	700104	10.0	10.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

MV-Supp A_00021	Amount Added: 5.00	Units: uL	
MV-567649-D_00001	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.92	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3845.D

Injection Date: 10-Nov-2016 08:29:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCV

Worklist Smp#: 3

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

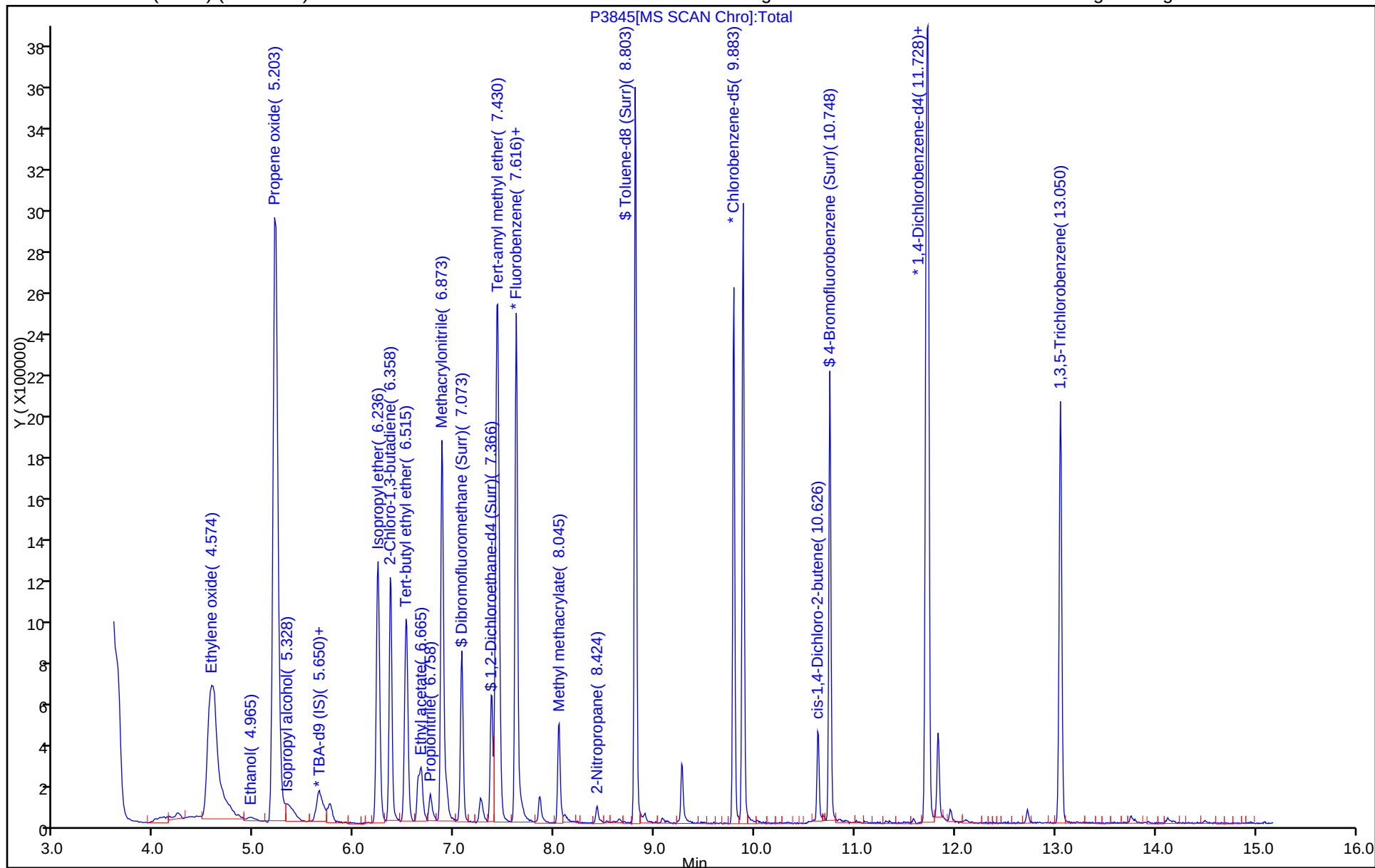
ALS Bottle#: 11

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: CCVC 280-350742/37 Calibration Date: 11/10/2016 17:40
Instrument ID: VMS_P Calib Start Date: 09/16/2016 09:16
GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 09/16/2016 11:21
Lab File ID: P3873.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Pentanone	Lin2		0.1312			20.0		50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3873.D
 Lims ID: CCVC
 Client ID:
 Sample Type: CCVC
 Inject. Date: 10-Nov-2016 17:40:30 ALS Bottle#: 39 Worklist Smp#: 37
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCVC
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:28 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:49:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.650	0.000	38	464183	250.0	250.0	s
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	5124813	12.5	12.5	s
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	87	1214580	12.5	12.5	s
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.706	0.000	96	1894957	12.5	12.5	s
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	93	1192509	11.5	10.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.366	0.000	99	1019530	11.5	9.56	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.803	0.000	94	5572388	11.5	11.1	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	1917412	11.5	11.5	
23 Dichlorodifluoromethane	85	3.873	3.873	0.000	100	1186785	10.0	6.02	
26 Chloromethane	50	4.097	4.097	0.000	98	923877	10.0	5.94	
27 Vinyl chloride	62	4.250	4.250	0.000	100	848106	10.0	5.89	
29 Bromomethane	94	4.613	4.613	0.000	94	627253	10.0	7.20	
30 Chloroethane	64	4.683	4.683	0.000	98	533122	10.0	6.18	
31 Dichlorofluoromethane	67	4.851	4.851	0.000	99	1740867	10.0	6.76	
32 Trichlorofluoromethane	101	4.963	4.963	0.000	100	1627321	10.0	6.40	
35 Ethyl ether	59	5.102	5.102	0.000	94	615663	10.0	9.50	
39 Acrolein	56	5.270	5.270	0.000	99	945001	100.0	75.1	
40 1,1,2-Trichloro-1,2,2-trif	151	5.354	5.354	0.000	96	923702	10.0	7.84	
41 Acetone	43	5.368	5.368	0.000	39	460707	40.0	28.5	
43 1,1-Dichloroethene	96	5.409	5.409	0.000	97	1271631	10.0	8.86	
44 Iodomethane	142	5.585	5.585	0.000	99	1983469	10.0	10.2	
45 Methyl acetate	43	5.600	5.600	0.000	98	1394668	50.0	41.9	
47 3-Chloro-1-propene	41	5.650	5.650	0.000	91	1913622	10.0	7.35	
48 Carbon disulfide	76	5.700	5.700	0.000	100	4368183	10.0	8.85	
49 2-Methyl-2-propanol	59	5.707	5.707	0.000	33	267080	100.0	99.9	
50 Methylene Chloride	84	5.757	5.757	0.000	95	1327124	10.0	10.5	
51 Methyl tert-butyl ether	73	5.921	5.921	0.000	97	1667898	10.0	9.61	
52 Acrylonitrile	53	5.921	5.921	0.000	73	1292775	100.0	97.7	
53 trans-1,2-Dichloroethene	96	5.964	5.964	0.000	97	1274945	10.0	9.30	
54 Hexane	57	6.122	6.122	0.000	95	1756914	10.0	6.46	
55 Vinyl acetate	43	6.236	6.236	0.000	97	3639972	20.0	16.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.293	6.293	0.000	97	2277993	10.0	8.68	
61 2-Butanone (MEK)	43	6.687	6.687	0.000	100	733897	40.0	32.9	
62 sec-Butyl Alcohol	45	6.729	6.729	0.000	38	294450	150.0	145.5	
63 cis-1,2-Dichloroethene	96	6.729	6.729	0.000	84	1283075	10.0	10.0	
64 2,2-Dichloropropane	77	6.758	6.758	0.000	92	1330928	10.0	7.41	
67 Chlorobromomethane	128	6.937	6.937	0.000	97	474757	10.0	11.6	
68 Chloroform	83	6.944	6.944	0.000	95	2087418	10.0	8.96	
69 Tetrahydrofuran	42	6.965	6.965	0.000	87	204422	20.0	16.3	
70 Isobutyl alcohol	41	7.151	7.151	0.000	97	231160	250.0	246.9	M
71 1,1,1-Trichloroethane	97	7.151	7.151	0.000	99	1615788	10.0	7.95	
72 Cyclohexane	56	7.223	7.223	0.000	91	2112030	10.0	7.62	
73 1,1-Dichloropropene	75	7.259	7.259	0.000	97	1699348	10.0	8.17	
74 Carbon tetrachloride	117	7.287	7.287	0.000	97	1461851	10.0	7.56	
76 1,2-Dichloroethane	62	7.430	7.430	0.000	98	1146471	10.0	8.43	
77 Benzene	78	7.437	7.437	0.000	97	5111450	10.0	9.93	
14 n-Heptane	43	7.502	7.502	0.000	93	1999465	10.0	7.28	
79 Trichloroethene	95	7.902	7.902	0.000	97	1358293	10.0	9.56	
80 2-Pentanone	43	7.959	7.959	0.000	98	1075841	NC	NC	
82 Methylcyclohexane	55	8.088	8.088	0.000	92	1747900	10.0	7.34	
83 1,2-Dichloropropane	63	8.095	8.095	0.000	94	1139977	10.0	9.83	
84 1,4-Dioxane	88	8.152	8.152	0.000	84	53237	200.0	149.2	
85 Dibromomethane	93	8.202	8.202	0.000	96	440985	10.0	10.4	
86 Dichlorobromomethane	83	8.274	8.274	0.000	99	1329097	10.0	10.2	
87 2-Chloroethyl vinyl ether	63	8.410	8.410	0.000	94	977815	10.0	23.4	
89 cis-1,3-Dichloropropene	75	8.588	8.588	0.000	94	1418422	10.0	8.31	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.646	0.000	98	1654684	40.0	36.2	
91 Toluene	91	8.860	8.860	0.000	98	5283005	10.0	9.92	
92 Ethyl methacrylate	69	8.939	8.939	0.000	92	825449	10.0	11.7	
93 trans-1,3-Dichloropropene	75	8.967	8.967	0.000	98	1015518	10.0	9.21	
94 1,1,2-Trichloroethane	97	9.125	9.125	0.000	92	617894	10.0	10.9	
95 2-Hexanone	43	9.232	9.232	0.000	98	1209381	40.0	35.4	
96 1,3-Dichloropropane	76	9.253	9.253	0.000	95	1118735	10.0	9.25	
97 Tetrachloroethene	164	9.268	9.268	0.000	96	992365	10.0	7.91	
98 Chlorodibromomethane	129	9.446	9.446	0.000	90	700568	10.0	8.66	
100 Ethylene Dibromide	107	9.575	9.575	0.000	98	567939	10.0	10.2	
101 1-Chlorohexane	91	9.790	9.790	0.000	97	835328	5.00	4.24	
102 Chlorobenzene	112	9.904	9.904	0.000	96	3309611	10.0	9.19	
103 Ethylbenzene	106	9.940	9.940	0.000	97	1942087	10.0	8.77	
104 1,1,1,2-Tetrachloroethane	131	9.940	9.940	0.000	96	1023072	10.0	9.92	
105 m-Xylene & p-Xylene	106	10.011	10.011	0.000	98	2293435	10.0	8.59	
107 o-Xylene	106	10.326	10.326	0.000	89	2343576	10.0	9.60	
106 Styrene	104	10.333	10.333	0.000	87	3116171	10.0	9.33	
108 Bromoform	173	10.540	10.540	0.000	95	275058	10.0	8.52	
109 Isopropylbenzene	105	10.583	10.583	0.000	96	5672508	10.0	7.92	
111 Cyclohexanone	55	10.734	10.734	0.000	94	583069	400.0	375.9	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.805	0.000	95	646758	10.0	9.71	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.841	0.000	74	109326	10.0	5.42	
114 1,2,3-Trichloropropane	110	10.877	10.877	0.000	85	192907	10.0	10.2	
115 N-Propylbenzene	120	10.905	10.905	0.000	98	1639001	10.0	8.32	
116 Bromobenzene	156	10.912	10.912	0.000	96	1259856	10.0	9.69	
117 1,3,5-Trimethylbenzene	105	11.012	11.012	0.000	96	4735246	10.0	8.16	
118 2-Chlorotoluene	126	11.034	11.034	0.000	96	1404807	10.0	8.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.112	11.112	0.000	98	1449658	10.0	9.12	
120 tert-Butylbenzene	119	11.313	11.313	0.000	92	4688067	10.0	8.09	
121 1,2,4-Trimethylbenzene	105	11.341	11.341	0.000	98	4910509	10.0	8.25	
122 sec-Butylbenzene	134	11.491	11.491	0.000	95	1251960	10.0	7.70	
123 4-Isopropyltoluene	119	11.584	11.584	0.000	96	4986340	10.0	7.50	
124 1,3-Dichlorobenzene	146	11.663	11.663	0.000	98	2592906	10.0	8.88	
126 1,4-Dichlorobenzene	146	11.727	11.727	0.000	93	2548004	10.0	8.71	
127 n-Butylbenzene	91	11.949	11.949	0.000	98	4787661	10.0	6.72	
128 1,2-Dichlorobenzene	146	12.092	12.092	0.000	97	2213140	10.0	9.30	
129 1,2-Dibromo-3-Chloropropan	157	12.850	12.850	0.000	80	89633	10.0	9.54	
130 1,2,4-Trichlorobenzene	180	13.794	13.794	0.000	94	1542583	10.0	9.80	
131 Hexachlorobutadiene	225	13.930	13.930	0.000	98	802076	10.0	6.18	
132 Naphthalene	128	14.173	14.173	0.000	97	2062591	10.0	9.47	
133 1,2,3-Trichlorobenzene	180	14.494	14.494	0.000	96	1190447	10.0	10.1	
S 140 1,2-Dichloroethene, Total	96				0		20.0	19.3	
S 138 1,2-Dichloroethene, Total	1				0		20.0	19.3	
S 139 Xylenes, Total	106				0		20.0	18.2	
S 137 1,3-Dichloropropene, Total	1				0		20.0	17.5	
S 134 Trihalomethanes, Total	1				0		40.0	36.3	
S 135 Xylenes, Total (URS)	1				0		20.0	18.2	
S 136 Total BTEX	1				0			46.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

s - Failed ISTD Recovery Test

Review Flags

M - Manually Integrated

Reagents:

MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL	
MV-Main A_00027	Amount Added: 5.00	Units: uL	
MV-567649-D_00001	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.92	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3873.D

Injection Date: 10-Nov-2016 17:40:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCVC

Worklist Smp#: 37

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

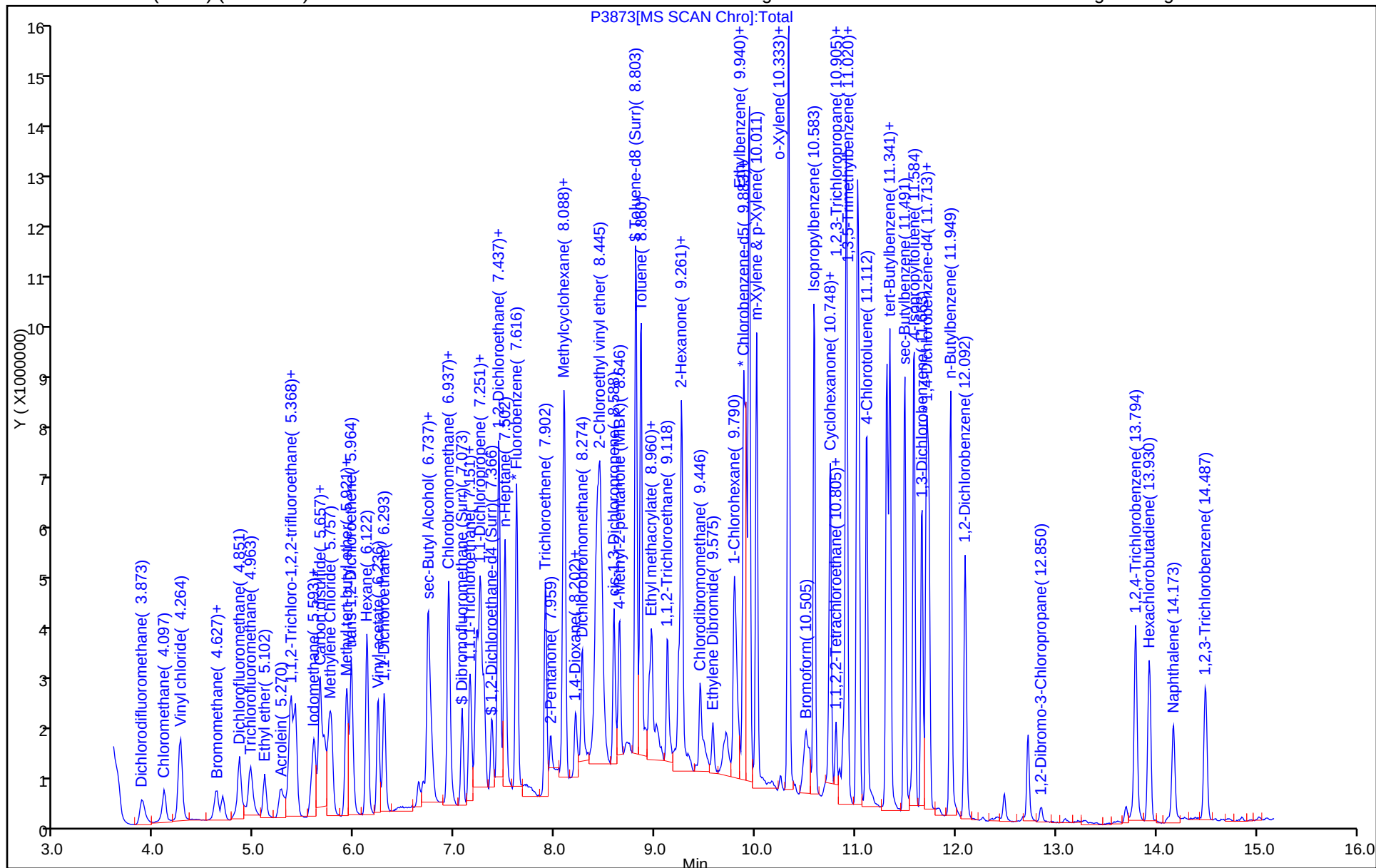
ALS Bottle#: 39

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCVC 280-350742/37 Calibration Date: 11/10/2016 17:40

Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54

GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51

Lab File ID: P3873.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4808	0.2895		6.02	10.0	-39.8	50.0
Chloromethane	Ave	0.3796	0.2253	0.1000	5.94	10.0	-40.6	50.0
Vinyl chloride	Ave	0.3512	0.2069		5.89	10.0	-41.1	50.0
Bromomethane	Ave	0.2125	0.1530		7.20	10.0	-28.0	50.0
Chloroethane	Ave	0.2105	0.1300		6.18	10.0	-38.2	50.0
Dichlorofluoromethane	Ave	0.6286	0.4246		6.76	10.0	-32.4	50.0
Trichlorofluoromethane	Ave	0.6198	0.3969		6.40	10.0	-36.0	50.0
Ethyl ether	Ave	0.1580	0.1502		9.50	10.0	-5.0	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2874	0.2253		7.84	10.0	-21.6	50.0
Acetone	Ave	0.0394	0.0281		28.5	40.0	-28.7	50.0
1,1-Dichloroethene	Ave	0.3500	0.3102		8.86	10.0	-11.4	50.0
Iodomethane	Ave	0.4756	0.4838		10.2	10.0	1.7	50.0
Methyl acetate	Ave	0.0812	0.0680		41.9	50.0	-16.2	50.0
3-Chloro-1-propene	Ave	0.6346	0.4668		7.35	10.0	-26.5	50.0
Carbon disulfide	Ave	1.204	1.065		8.85	10.0	-11.5	50.0
t-Butyl alcohol	Ave	1.440	1.438		99.9	100	-0.1	50.0
Methylene Chloride	Lin1		0.3237		10.5	10.0	5.3	50.0
Acrylonitrile	Ave	0.0323	0.0315		97.7	100	-2.3	50.0
Methyl tert-butyl ether	Ave	0.4234	0.4068		9.61	10.0	-3.9	50.0
trans-1,2-Dichloroethene	Ave	0.3344	0.3110		9.30	10.0	-7.0	50.0
Hexane	Ave	2.800	1.808		6.46	10.0	-35.4	50.0
1,1-Dichloroethane	Ave	0.6401	0.5556	0.1000	8.68	10.0	-13.2	50.0
2-Butanone (MEK)	Lin2		0.0448		32.9	40.0	-17.7	50.0
cis-1,2-Dichloroethene	Ave	0.3131	0.3130		10.0	10.0	-0.0	50.0
sec-Butyl Alcohol	Ave	1.090	1.057		146	150	-3.0	50.0
2,2-Dichloropropane	Ave	0.4380	0.3246		7.41	10.0	-25.9	50.0
Bromochloromethane	Ave	0.0998	0.1158		11.6	10.0	16.1	50.0
Chloroform	Ave	0.5682	0.5091		8.96	10.0	-10.4	50.0
Tetrahydrofuran	Lin2		0.0249		16.3	20.0	-18.3	50.0
1,1,1-Trichloroethane	Ave	0.4959	0.3941		7.95	10.0	-20.5	50.0
Isobutyl alcohol	Ave	0.5043	0.4980		247	250	-1.3	50.0
Cyclohexane	Ave	0.6760	0.5152		7.62	10.0	-23.8	50.0
1,1-Dichloropropene	Ave	0.5075	0.4145		8.17	10.0	-18.3	50.0
Carbon tetrachloride	Ave	0.4714	0.3566		7.56	10.0	-24.4	50.0
1,2-Dichloroethane	Ave	0.3318	0.2796		8.43	10.0	-15.7	50.0
Benzene	Ave	1.255	1.247		9.93	10.0	-0.7	50.0
Trichloroethene	Ave	0.3464	0.3313		9.56	10.0	-4.4	50.0
Methylcyclohexane	Ave	0.5808	0.4263		7.34	10.0	-26.6	50.0
1,2-Dichloropropane	Ave	0.2829	0.2781		9.83	10.0	-1.7	50.0
1,4-Dioxane	Lin2		0.0007		149	200	-25.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Lab Sample ID: CCVC 280-350742/37 Calibration Date: 11/10/2016 17:40

Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54

GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51

Lab File ID: P3873.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.1034	0.1076		10.4	10.0	4.0	50.0
Bromodichloromethane	Ave	0.3189	0.3242		10.2	10.0	1.7	50.0
cis-1,3-Dichloropropene	Lin1		1.460		8.31	10.0	-16.9	50.0
4-Methyl-2-pentanone (MIBK)	Lin2		0.1009		36.2	40.0	-9.6	50.0
Toluene	Ave	1.299	1.289		9.92	10.0	-0.8	50.0
Ethyl methacrylate	Lin2		0.8495		11.7	10.0	16.6	50.0
trans-1,3-Dichloropropene	Lin1		0.2477		9.21	10.0	-7.9	50.0
1,1,2-Trichloroethane	Ave	0.1380	0.1507		10.9	10.0	9.2	50.0
2-Hexanone	Lin2		0.3112		35.4	40.0	-11.5	50.0
1,3-Dichloropropane	Ave	1.245	1.151		9.25	10.0	-7.5	50.0
Tetrachloroethene	Ave	1.292	1.021		7.91	10.0	-20.9	50.0
Dibromochloromethane	Lin1		0.7210		8.66	10.0	-13.4	50.0
1,2-Dibromoethane	Ave	0.5750	0.5845		10.2	10.0	1.6	50.0
1-Chlorohexane	Ave	2.027	1.719		4.24	5.00	-15.2	50.0
Chlorobenzene	Ave	3.707	3.406	0.3000	9.19	10.0	-8.1	50.0
1,1,1,2-Tetrachloroethane	Ave	1.062	1.053		9.92	10.0	-0.8	50.0
Ethylbenzene	Ave	2.280	1.999		8.77	10.0	-12.3	50.0
m-Xylene & p-Xylene	Ave	2.746	2.360		8.59	10.0	-14.1	50.0
o-Xylene	Ave	2.513	2.412		9.60	10.0	-4.0	50.0
Styrene	Ave	3.438	3.207		9.33	10.0	-6.7	50.0
Bromoform	Lin1		0.2831	0.1000	8.52	10.0	-14.8	50.0
Isopropylbenzene	Ave	4.725	3.742		7.92	10.0	-20.8	50.0
Cyclohexanone	Lin2		0.0150		376	400	-6.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.4393	0.4266	0.3000	9.71	10.0	-2.9	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.0721		5.42	10.0	-45.8	50.0
1,2,3-Trichloropropane	Ave	0.1252	0.1273		10.2	10.0	1.7	50.0
N-Propylbenzene	Ave	1.299	1.081		8.32	10.0	-16.8	50.0
Bromobenzene	Ave	0.8574	0.8311		9.69	10.0	-3.1	50.0
1,3,5-Trimethylbenzene	Ave	3.830	3.124		8.16	10.0	-18.4	50.0
2-Chlorotoluene	Ave	1.049	0.9267		8.84	10.0	-11.6	50.0
4-Chlorotoluene	Ave	1.049	0.9563		9.12	10.0	-8.8	50.0
tert-Butylbenzene	Ave	3.823	3.092		8.09	10.0	-19.1	50.0
1,2,4-Trimethylbenzene	Ave	3.924	3.239		8.25	10.0	-17.5	50.0
sec-Butylbenzene	Ave	1.072	0.8259		7.70	10.0	-23.0	50.0
4-Isopropyltoluene	Ave	4.387	3.289		7.50	10.0	-25.0	50.0
1,3-Dichlorobenzene	Ave	1.927	1.710		8.88	10.0	-11.2	50.0
1,4-Dichlorobenzene	Ave	1.930	1.681		8.71	10.0	-12.9	50.0
n-Butylbenzene	Ave	4.702	3.158		6.72	10.0	-32.8	50.0
1,2-Dichlorobenzene	Ave	1.570	1.460		9.30	10.0	-7.0	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0591		9.54	10.0	-4.6	50.0
1,2,4-Trichlorobenzene	Ave	1.038	1.018		9.80	10.0	-2.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Lab Sample ID: CCVC 280-350742/37 Calibration Date: 11/10/2016 17:40
Instrument ID: VMS_P Calib Start Date: 10/20/2016 09:54
GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 10/20/2016 11:51
Lab File ID: P3873.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobutadiene	Ave	0.8561	0.5291		6.18	10.0	-38.2	50.0
Naphthalene	Lin1		1.361		9.47	10.0	-5.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7807	0.7853		10.1	10.0	0.6	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3873.D
 Lims ID: CCVC
 Client ID:
 Sample Type: CCVC
 Inject. Date: 10-Nov-2016 17:40:30 ALS Bottle#: 39 Worklist Smp#: 37
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCVC
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:28 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:49:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.650	0.000	38	464183	250.0	250.0	s
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	5124813	12.5	12.5	s
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	87	1214580	12.5	12.5	s
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.706	0.000	96	1894957	12.5	12.5	s
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	93	1192509	11.5	10.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.366	0.000	99	1019530	11.5	9.56	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.803	0.000	94	5572388	11.5	11.1	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	1917412	11.5	11.5	
23 Dichlorodifluoromethane	85	3.873	3.873	0.000	100	1186785	10.0	6.02	
26 Chloromethane	50	4.097	4.097	0.000	98	923877	10.0	5.94	
27 Vinyl chloride	62	4.250	4.250	0.000	100	848106	10.0	5.89	
29 Bromomethane	94	4.613	4.613	0.000	94	627253	10.0	7.20	
30 Chloroethane	64	4.683	4.683	0.000	98	533122	10.0	6.18	
31 Dichlorofluoromethane	67	4.851	4.851	0.000	99	1740867	10.0	6.76	
32 Trichlorofluoromethane	101	4.963	4.963	0.000	100	1627321	10.0	6.40	
35 Ethyl ether	59	5.102	5.102	0.000	94	615663	10.0	9.50	
39 Acrolein	56	5.270	5.270	0.000	99	945001	100.0	75.1	
40 1,1,2-Trichloro-1,2,2-trif	151	5.354	5.354	0.000	96	923702	10.0	7.84	
41 Acetone	43	5.368	5.368	0.000	39	460707	40.0	28.5	
43 1,1-Dichloroethene	96	5.409	5.409	0.000	97	1271631	10.0	8.86	
44 Iodomethane	142	5.585	5.585	0.000	99	1983469	10.0	10.2	
45 Methyl acetate	43	5.600	5.600	0.000	98	1394668	50.0	41.9	
47 3-Chloro-1-propene	41	5.650	5.650	0.000	91	1913622	10.0	7.35	
48 Carbon disulfide	76	5.700	5.700	0.000	100	4368183	10.0	8.85	
49 2-Methyl-2-propanol	59	5.707	5.707	0.000	33	267080	100.0	99.9	
50 Methylene Chloride	84	5.757	5.757	0.000	95	1327124	10.0	10.5	
51 Methyl tert-butyl ether	73	5.921	5.921	0.000	97	1667898	10.0	9.61	
52 Acrylonitrile	53	5.921	5.921	0.000	73	1292775	100.0	97.7	
53 trans-1,2-Dichloroethene	96	5.964	5.964	0.000	97	1274945	10.0	9.30	
54 Hexane	57	6.122	6.122	0.000	95	1756914	10.0	6.46	
55 Vinyl acetate	43	6.236	6.236	0.000	97	3639972	20.0	16.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.293	6.293	0.000	97	2277993	10.0	8.68	
61 2-Butanone (MEK)	43	6.687	6.687	0.000	100	733897	40.0	32.9	
62 sec-Butyl Alcohol	45	6.729	6.729	0.000	38	294450	150.0	145.5	
63 cis-1,2-Dichloroethene	96	6.729	6.729	0.000	84	1283075	10.0	10.0	
64 2,2-Dichloropropane	77	6.758	6.758	0.000	92	1330928	10.0	7.41	
67 Chlorobromomethane	128	6.937	6.937	0.000	97	474757	10.0	11.6	
68 Chloroform	83	6.944	6.944	0.000	95	2087418	10.0	8.96	
69 Tetrahydrofuran	42	6.965	6.965	0.000	87	204422	20.0	16.3	
70 Isobutyl alcohol	41	7.151	7.151	0.000	97	231160	250.0	246.9	M
71 1,1,1-Trichloroethane	97	7.151	7.151	0.000	99	1615788	10.0	7.95	
72 Cyclohexane	56	7.223	7.223	0.000	91	2112030	10.0	7.62	
73 1,1-Dichloropropene	75	7.259	7.259	0.000	97	1699348	10.0	8.17	
74 Carbon tetrachloride	117	7.287	7.287	0.000	97	1461851	10.0	7.56	
76 1,2-Dichloroethane	62	7.430	7.430	0.000	98	1146471	10.0	8.43	
77 Benzene	78	7.437	7.437	0.000	97	5111450	10.0	9.93	
14 n-Heptane	43	7.502	7.502	0.000	93	1999465	10.0	7.28	
79 Trichloroethene	95	7.902	7.902	0.000	97	1358293	10.0	9.56	
80 2-Pentanone	43	7.959	7.959	0.000	98	1075841	NC	NC	
82 Methylcyclohexane	55	8.088	8.088	0.000	92	1747900	10.0	7.34	
83 1,2-Dichloropropane	63	8.095	8.095	0.000	94	1139977	10.0	9.83	
84 1,4-Dioxane	88	8.152	8.152	0.000	84	53237	200.0	149.2	
85 Dibromomethane	93	8.202	8.202	0.000	96	440985	10.0	10.4	
86 Dichlorobromomethane	83	8.274	8.274	0.000	99	1329097	10.0	10.2	
87 2-Chloroethyl vinyl ether	63	8.410	8.410	0.000	94	977815	10.0	23.4	
89 cis-1,3-Dichloropropene	75	8.588	8.588	0.000	94	1418422	10.0	8.31	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.646	0.000	98	1654684	40.0	36.2	
91 Toluene	91	8.860	8.860	0.000	98	5283005	10.0	9.92	
92 Ethyl methacrylate	69	8.939	8.939	0.000	92	825449	10.0	11.7	
93 trans-1,3-Dichloropropene	75	8.967	8.967	0.000	98	1015518	10.0	9.21	
94 1,1,2-Trichloroethane	97	9.125	9.125	0.000	92	617894	10.0	10.9	
95 2-Hexanone	43	9.232	9.232	0.000	98	1209381	40.0	35.4	
96 1,3-Dichloropropane	76	9.253	9.253	0.000	95	1118735	10.0	9.25	
97 Tetrachloroethene	164	9.268	9.268	0.000	96	992365	10.0	7.91	
98 Chlorodibromomethane	129	9.446	9.446	0.000	90	700568	10.0	8.66	
100 Ethylene Dibromide	107	9.575	9.575	0.000	98	567939	10.0	10.2	
101 1-Chlorohexane	91	9.790	9.790	0.000	97	835328	5.00	4.24	
102 Chlorobenzene	112	9.904	9.904	0.000	96	3309611	10.0	9.19	
103 Ethylbenzene	106	9.940	9.940	0.000	97	1942087	10.0	8.77	
104 1,1,1,2-Tetrachloroethane	131	9.940	9.940	0.000	96	1023072	10.0	9.92	
105 m-Xylene & p-Xylene	106	10.011	10.011	0.000	98	2293435	10.0	8.59	
107 o-Xylene	106	10.326	10.326	0.000	89	2343576	10.0	9.60	
106 Styrene	104	10.333	10.333	0.000	87	3116171	10.0	9.33	
108 Bromoform	173	10.540	10.540	0.000	95	275058	10.0	8.52	
109 Isopropylbenzene	105	10.583	10.583	0.000	96	5672508	10.0	7.92	
111 Cyclohexanone	55	10.734	10.734	0.000	94	583069	400.0	375.9	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.805	0.000	95	646758	10.0	9.71	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.841	0.000	74	109326	10.0	5.42	
114 1,2,3-Trichloropropane	110	10.877	10.877	0.000	85	192907	10.0	10.2	
115 N-Propylbenzene	120	10.905	10.905	0.000	98	1639001	10.0	8.32	
116 Bromobenzene	156	10.912	10.912	0.000	96	1259856	10.0	9.69	
117 1,3,5-Trimethylbenzene	105	11.012	11.012	0.000	96	4735246	10.0	8.16	
118 2-Chlorotoluene	126	11.034	11.034	0.000	96	1404807	10.0	8.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.112	11.112	0.000	98	1449658	10.0	9.12	
120 tert-Butylbenzene	119	11.313	11.313	0.000	92	4688067	10.0	8.09	
121 1,2,4-Trimethylbenzene	105	11.341	11.341	0.000	98	4910509	10.0	8.25	
122 sec-Butylbenzene	134	11.491	11.491	0.000	95	1251960	10.0	7.70	
123 4-Isopropyltoluene	119	11.584	11.584	0.000	96	4986340	10.0	7.50	
124 1,3-Dichlorobenzene	146	11.663	11.663	0.000	98	2592906	10.0	8.88	
126 1,4-Dichlorobenzene	146	11.727	11.727	0.000	93	2548004	10.0	8.71	
127 n-Butylbenzene	91	11.949	11.949	0.000	98	4787661	10.0	6.72	
128 1,2-Dichlorobenzene	146	12.092	12.092	0.000	97	2213140	10.0	9.30	
129 1,2-Dibromo-3-Chloropropan	157	12.850	12.850	0.000	80	89633	10.0	9.54	
130 1,2,4-Trichlorobenzene	180	13.794	13.794	0.000	94	1542583	10.0	9.80	
131 Hexachlorobutadiene	225	13.930	13.930	0.000	98	802076	10.0	6.18	
132 Naphthalene	128	14.173	14.173	0.000	97	2062591	10.0	9.47	
133 1,2,3-Trichlorobenzene	180	14.494	14.494	0.000	96	1190447	10.0	10.1	
S 140 1,2-Dichloroethene, Total	96				0		20.0	19.3	
S 138 1,2-Dichloroethene, Total	1				0		20.0	19.3	
S 139 Xylenes, Total	106				0		20.0	18.2	
S 137 1,3-Dichloropropene, Total	1				0		20.0	17.5	
S 134 Trihalomethanes, Total	1				0		40.0	36.3	
S 135 Xylenes, Total (URS)	1				0		20.0	18.2	
S 136 Total BTEX	1				0			46.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

s - Failed ISTD Recovery Test

Review Flags

M - Manually Integrated

Reagents:

MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL	
MV-Main A_00027	Amount Added: 5.00	Units: uL	
MV-567649-D_00001	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.92	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\\Denver\\ChromData\\VMS_P\\20161110-52936.b\\P3873.D

Injection Date: 10-Nov-2016 17:40:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCVC

Worklist Smp#: 37

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

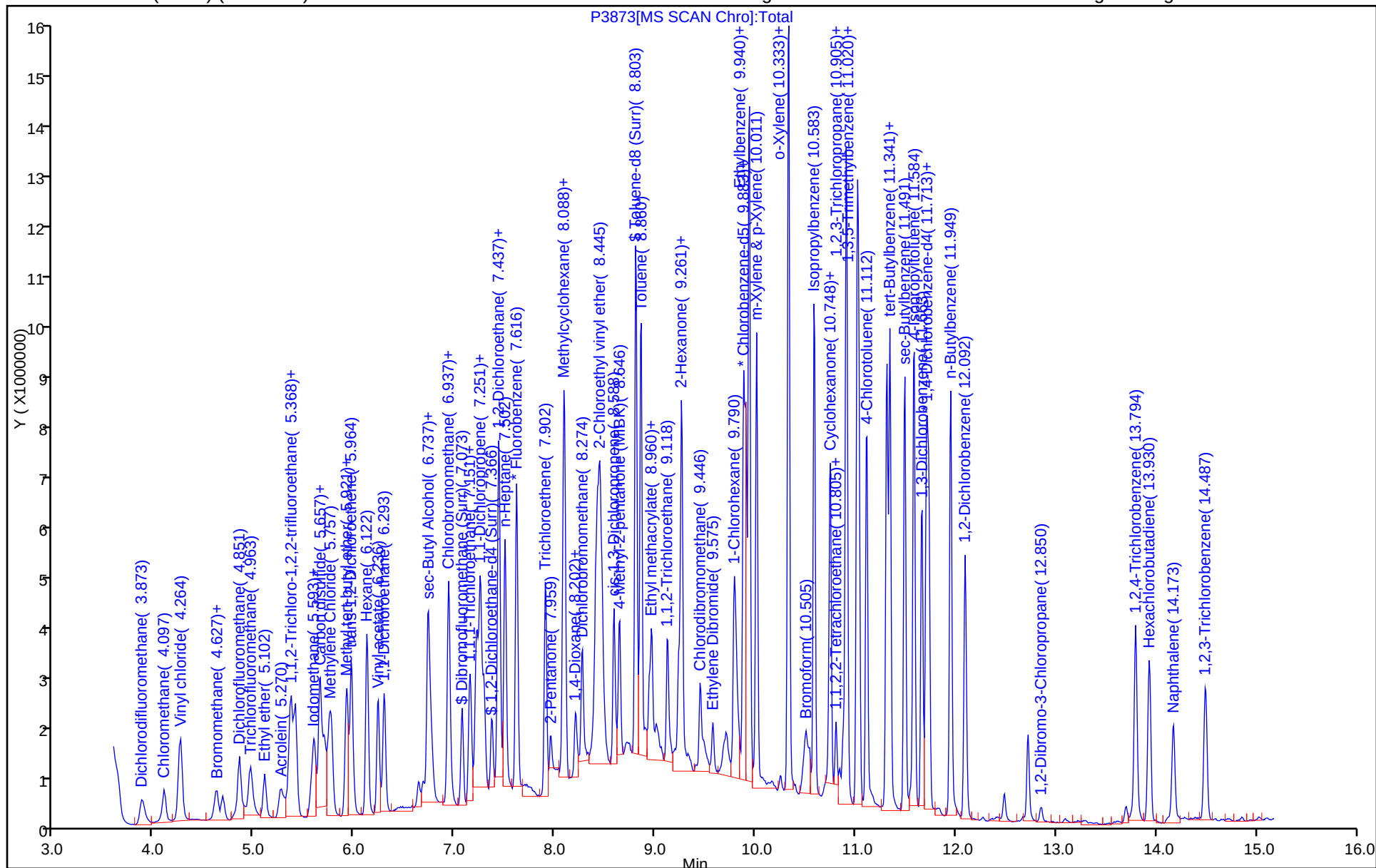
ALS Bottle#: 39

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver

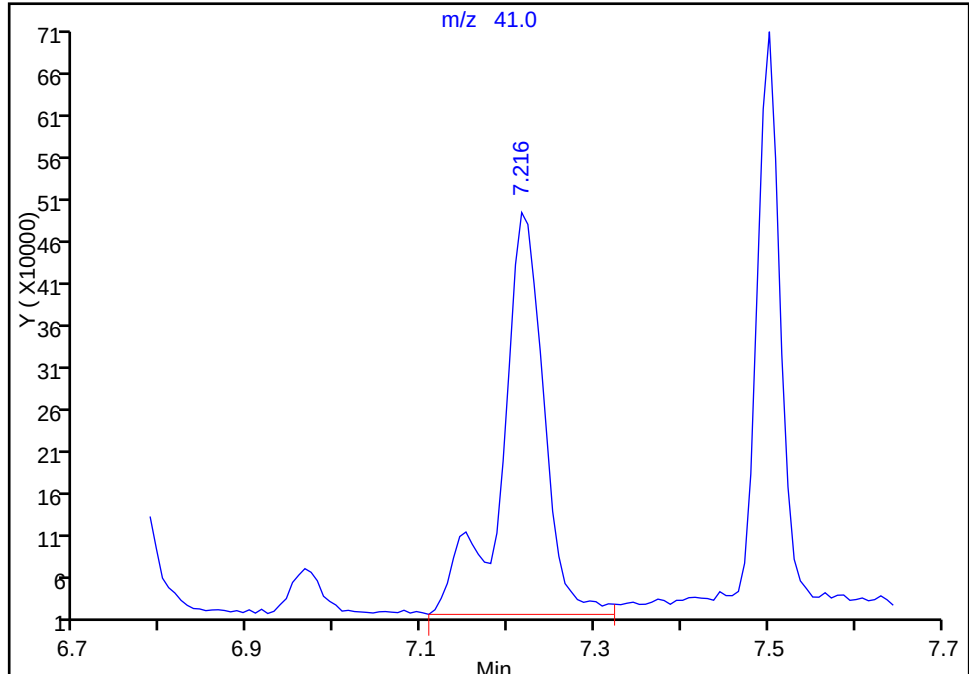
Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3873.D
Injection Date: 10-Nov-2016 17:40:30 Instrument ID: VMS_P
Lims ID: CCVC
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 39 Worklist Smp#: 37
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (60.25) (0.25 mm) Detector: MS SCAN

70 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

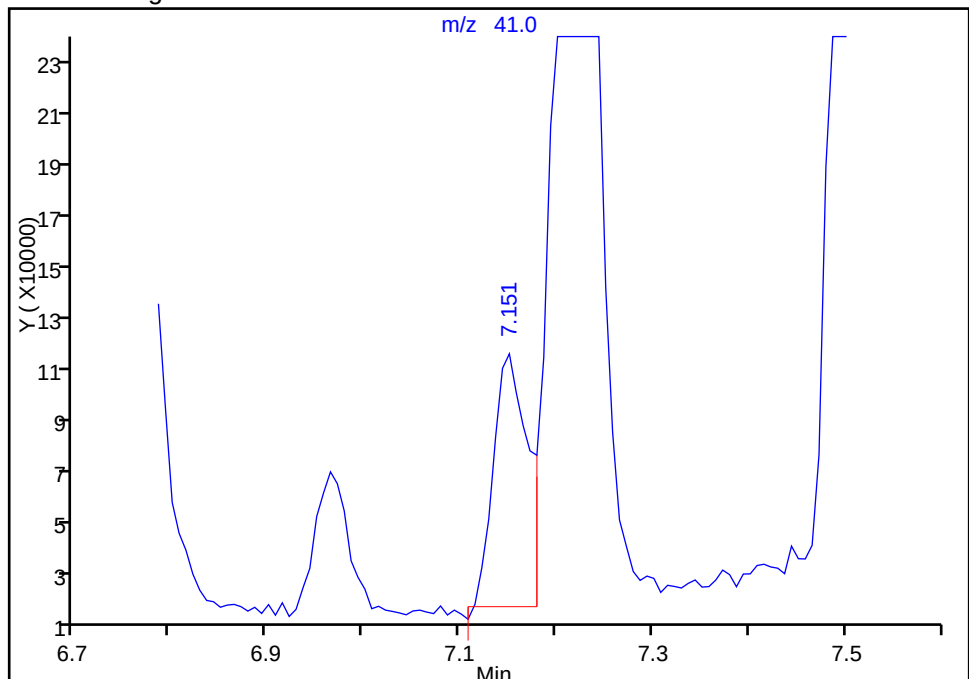
RT: 7.22
Area: 1611012
Amount: 1720.5230
Amount Units: ug/l

Processing Integration Results



RT: 7.15
Area: 231160
Amount: 246.8735
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 11-Nov-2016 08:49:04

Audit Action: Manually Integrated

Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Lab Sample ID: CCVC 280-350742/37 Calibration Date: 11/10/2016 17:40
 Instrument ID: VMS_P Calib Start Date: 11/07/2016 11:12
 GC Column: DB-624 (60.25) ID: 0.25 (mm) Calib End Date: 11/07/2016 12:50
 Lab File ID: P3873.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acrolein	Ave	0.0307	0.0231		75.1	100	-24.9	50.0
Vinyl acetate	Lin2		0.4439		16.4	20.0	-18.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.2385		23.4	10.0	134.0*	50.0
Dibromofluoromethane (Surr)	Ave	0.2843	0.2529		10.2	11.5	-11.0	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2600	0.2162		9.56	11.5	-16.8	50.0
Toluene-d8 (Surr)	Ave	5.160	4.987		11.1	11.5	-3.4	50.0
4-Bromofluorobenzene (Surr)	Lin2		1.100		11.5	11.5	-0.0	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3873.D
 Lims ID: CCVC
 Client ID:
 Sample Type: CCVC
 Inject. Date: 10-Nov-2016 17:40:30 ALS Bottle#: 39 Worklist Smp#: 37
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: CCVC
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Sublist: chrom-AQ_VMSP_8260*sub78
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:28 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:49:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.650	0.000	38	464183	250.0	250.0	s
* 1 Fluorobenzene	96	7.616	7.616	0.000	98	5124813	12.5	12.5	s
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	87	1214580	12.5	12.5	s
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.706	0.000	96	1894957	12.5	12.5	s
\$ 5 Dibromofluoromethane (Surr	111	7.073	7.073	0.000	93	1192509	11.5	10.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.366	7.366	0.000	99	1019530	11.5	9.56	
\$ 7 Toluene-d8 (Surr)	98	8.803	8.803	0.000	94	5572388	11.5	11.1	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	1917412	11.5	11.5	
23 Dichlorodifluoromethane	85	3.873	3.873	0.000	100	1186785	10.0	6.02	
26 Chloromethane	50	4.097	4.097	0.000	98	923877	10.0	5.94	
27 Vinyl chloride	62	4.250	4.250	0.000	100	848106	10.0	5.89	
29 Bromomethane	94	4.613	4.613	0.000	94	627253	10.0	7.20	
30 Chloroethane	64	4.683	4.683	0.000	98	533122	10.0	6.18	
31 Dichlorofluoromethane	67	4.851	4.851	0.000	99	1740867	10.0	6.76	
32 Trichlorofluoromethane	101	4.963	4.963	0.000	100	1627321	10.0	6.40	
35 Ethyl ether	59	5.102	5.102	0.000	94	615663	10.0	9.50	
39 Acrolein	56	5.270	5.270	0.000	99	945001	100.0	75.1	
40 1,1,2-Trichloro-1,2,2-trif	151	5.354	5.354	0.000	96	923702	10.0	7.84	
41 Acetone	43	5.368	5.368	0.000	39	460707	40.0	28.5	
43 1,1-Dichloroethene	96	5.409	5.409	0.000	97	1271631	10.0	8.86	
44 Iodomethane	142	5.585	5.585	0.000	99	1983469	10.0	10.2	
45 Methyl acetate	43	5.600	5.600	0.000	98	1394668	50.0	41.9	
47 3-Chloro-1-propene	41	5.650	5.650	0.000	91	1913622	10.0	7.35	
48 Carbon disulfide	76	5.700	5.700	0.000	100	4368183	10.0	8.85	
49 2-Methyl-2-propanol	59	5.707	5.707	0.000	33	267080	100.0	99.9	
50 Methylene Chloride	84	5.757	5.757	0.000	95	1327124	10.0	10.5	
51 Methyl tert-butyl ether	73	5.921	5.921	0.000	97	1667898	10.0	9.61	
52 Acrylonitrile	53	5.921	5.921	0.000	73	1292775	100.0	97.7	
53 trans-1,2-Dichloroethene	96	5.964	5.964	0.000	97	1274945	10.0	9.30	
54 Hexane	57	6.122	6.122	0.000	95	1756914	10.0	6.46	
55 Vinyl acetate	43	6.236	6.236	0.000	97	3639972	20.0	16.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
57 1,1-Dichloroethane	63	6.293	6.293	0.000	97	2277993	10.0	8.68	
61 2-Butanone (MEK)	43	6.687	6.687	0.000	100	733897	40.0	32.9	
62 sec-Butyl Alcohol	45	6.729	6.729	0.000	38	294450	150.0	145.5	
63 cis-1,2-Dichloroethene	96	6.729	6.729	0.000	84	1283075	10.0	10.0	
64 2,2-Dichloropropane	77	6.758	6.758	0.000	92	1330928	10.0	7.41	
67 Chlorobromomethane	128	6.937	6.937	0.000	97	474757	10.0	11.6	
68 Chloroform	83	6.944	6.944	0.000	95	2087418	10.0	8.96	
69 Tetrahydrofuran	42	6.965	6.965	0.000	87	204422	20.0	16.3	
70 Isobutyl alcohol	41	7.151	7.151	0.000	97	231160	250.0	246.9	M
71 1,1,1-Trichloroethane	97	7.151	7.151	0.000	99	1615788	10.0	7.95	
72 Cyclohexane	56	7.223	7.223	0.000	91	2112030	10.0	7.62	
73 1,1-Dichloropropene	75	7.259	7.259	0.000	97	1699348	10.0	8.17	
74 Carbon tetrachloride	117	7.287	7.287	0.000	97	1461851	10.0	7.56	
76 1,2-Dichloroethane	62	7.430	7.430	0.000	98	1146471	10.0	8.43	
77 Benzene	78	7.437	7.437	0.000	97	5111450	10.0	9.93	
14 n-Heptane	43	7.502	7.502	0.000	93	1999465	10.0	7.28	
79 Trichloroethene	95	7.902	7.902	0.000	97	1358293	10.0	9.56	
80 2-Pentanone	43	7.959	7.959	0.000	98	1075841	NC	NC	
82 Methylcyclohexane	55	8.088	8.088	0.000	92	1747900	10.0	7.34	
83 1,2-Dichloropropane	63	8.095	8.095	0.000	94	1139977	10.0	9.83	
84 1,4-Dioxane	88	8.152	8.152	0.000	84	53237	200.0	149.2	
85 Dibromomethane	93	8.202	8.202	0.000	96	440985	10.0	10.4	
86 Dichlorobromomethane	83	8.274	8.274	0.000	99	1329097	10.0	10.2	
87 2-Chloroethyl vinyl ether	63	8.410	8.410	0.000	94	977815	10.0	23.4	
89 cis-1,3-Dichloropropene	75	8.588	8.588	0.000	94	1418422	10.0	8.31	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.646	0.000	98	1654684	40.0	36.2	
91 Toluene	91	8.860	8.860	0.000	98	5283005	10.0	9.92	
92 Ethyl methacrylate	69	8.939	8.939	0.000	92	825449	10.0	11.7	
93 trans-1,3-Dichloropropene	75	8.967	8.967	0.000	98	1015518	10.0	9.21	
94 1,1,2-Trichloroethane	97	9.125	9.125	0.000	92	617894	10.0	10.9	
95 2-Hexanone	43	9.232	9.232	0.000	98	1209381	40.0	35.4	
96 1,3-Dichloropropane	76	9.253	9.253	0.000	95	1118735	10.0	9.25	
97 Tetrachloroethene	164	9.268	9.268	0.000	96	992365	10.0	7.91	
98 Chlorodibromomethane	129	9.446	9.446	0.000	90	700568	10.0	8.66	
100 Ethylene Dibromide	107	9.575	9.575	0.000	98	567939	10.0	10.2	
101 1-Chlorohexane	91	9.790	9.790	0.000	97	835328	5.00	4.24	
102 Chlorobenzene	112	9.904	9.904	0.000	96	3309611	10.0	9.19	
103 Ethylbenzene	106	9.940	9.940	0.000	97	1942087	10.0	8.77	
104 1,1,1,2-Tetrachloroethane	131	9.940	9.940	0.000	96	1023072	10.0	9.92	
105 m-Xylene & p-Xylene	106	10.011	10.011	0.000	98	2293435	10.0	8.59	
107 o-Xylene	106	10.326	10.326	0.000	89	2343576	10.0	9.60	
106 Styrene	104	10.333	10.333	0.000	87	3116171	10.0	9.33	
108 Bromoform	173	10.540	10.540	0.000	95	275058	10.0	8.52	
109 Isopropylbenzene	105	10.583	10.583	0.000	96	5672508	10.0	7.92	
111 Cyclohexanone	55	10.734	10.734	0.000	94	583069	400.0	375.9	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.805	0.000	95	646758	10.0	9.71	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.841	0.000	74	109326	10.0	5.42	
114 1,2,3-Trichloropropane	110	10.877	10.877	0.000	85	192907	10.0	10.2	
115 N-Propylbenzene	120	10.905	10.905	0.000	98	1639001	10.0	8.32	
116 Bromobenzene	156	10.912	10.912	0.000	96	1259856	10.0	9.69	
117 1,3,5-Trimethylbenzene	105	11.012	11.012	0.000	96	4735246	10.0	8.16	
118 2-Chlorotoluene	126	11.034	11.034	0.000	96	1404807	10.0	8.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
119 4-Chlorotoluene	126	11.112	11.112	0.000	98	1449658	10.0	9.12	
120 tert-Butylbenzene	119	11.313	11.313	0.000	92	4688067	10.0	8.09	
121 1,2,4-Trimethylbenzene	105	11.341	11.341	0.000	98	4910509	10.0	8.25	
122 sec-Butylbenzene	134	11.491	11.491	0.000	95	1251960	10.0	7.70	
123 4-Isopropyltoluene	119	11.584	11.584	0.000	96	4986340	10.0	7.50	
124 1,3-Dichlorobenzene	146	11.663	11.663	0.000	98	2592906	10.0	8.88	
126 1,4-Dichlorobenzene	146	11.727	11.727	0.000	93	2548004	10.0	8.71	
127 n-Butylbenzene	91	11.949	11.949	0.000	98	4787661	10.0	6.72	
128 1,2-Dichlorobenzene	146	12.092	12.092	0.000	97	2213140	10.0	9.30	
129 1,2-Dibromo-3-Chloropropan	157	12.850	12.850	0.000	80	89633	10.0	9.54	
130 1,2,4-Trichlorobenzene	180	13.794	13.794	0.000	94	1542583	10.0	9.80	
131 Hexachlorobutadiene	225	13.930	13.930	0.000	98	802076	10.0	6.18	
132 Naphthalene	128	14.173	14.173	0.000	97	2062591	10.0	9.47	
133 1,2,3-Trichlorobenzene	180	14.494	14.494	0.000	96	1190447	10.0	10.1	
S 140 1,2-Dichloroethene, Total	96				0		20.0	19.3	
S 138 1,2-Dichloroethene, Total	1				0		20.0	19.3	
S 139 Xylenes, Total	106				0		20.0	18.2	
S 137 1,3-Dichloropropene, Total	1				0		20.0	17.5	
S 134 Trihalomethanes, Total	1				0		40.0	36.3	
S 135 Xylenes, Total (URS)	1				0		20.0	18.2	
S 136 Total BTEX	1				0			46.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

s - Failed ISTD Recovery Test

Review Flags

M - Manually Integrated

Reagents:

MV-2cleve+AVA_00018	Amount Added: 5.00	Units: uL	
MV-Gas/Ket A_00052	Amount Added: 5.00	Units: uL	
MV-Main A_00027	Amount Added: 5.00	Units: uL	
MV-567649-D_00001	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.92	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3873.D

Injection Date: 10-Nov-2016 17:40:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: CCVC

Worklist Smp#: 37

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

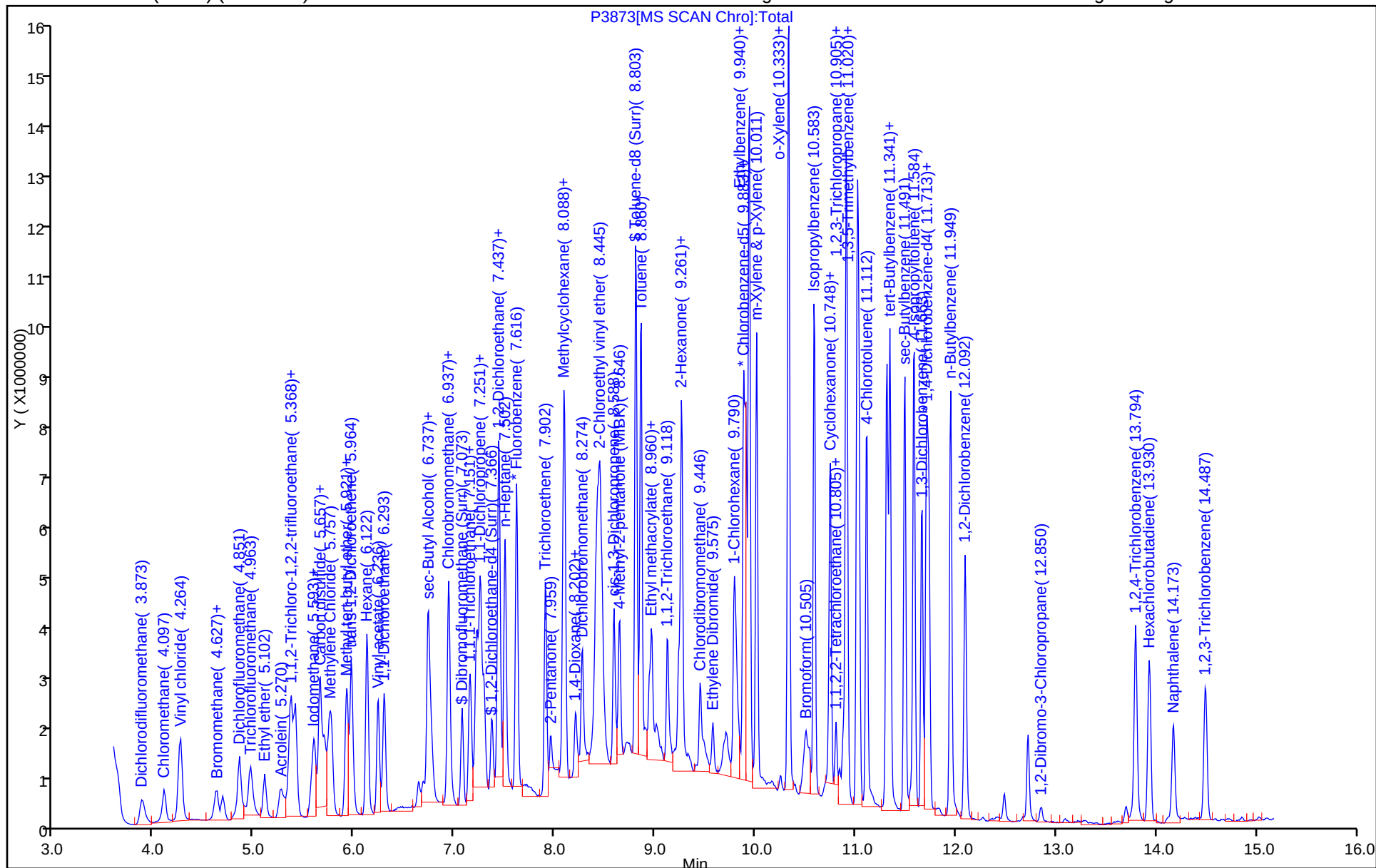
ALS Bottle#: 39

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9955.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 07-Oct-2016 21:00:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: bergerb Instrument ID: VMS_H
Method: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Oct-2016 11:36:21 Calib Date: 08-Oct-2016 03:30:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9972.D
Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK024

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 7 BFB	95	2.517	2.517	0.000	87	131453	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00021

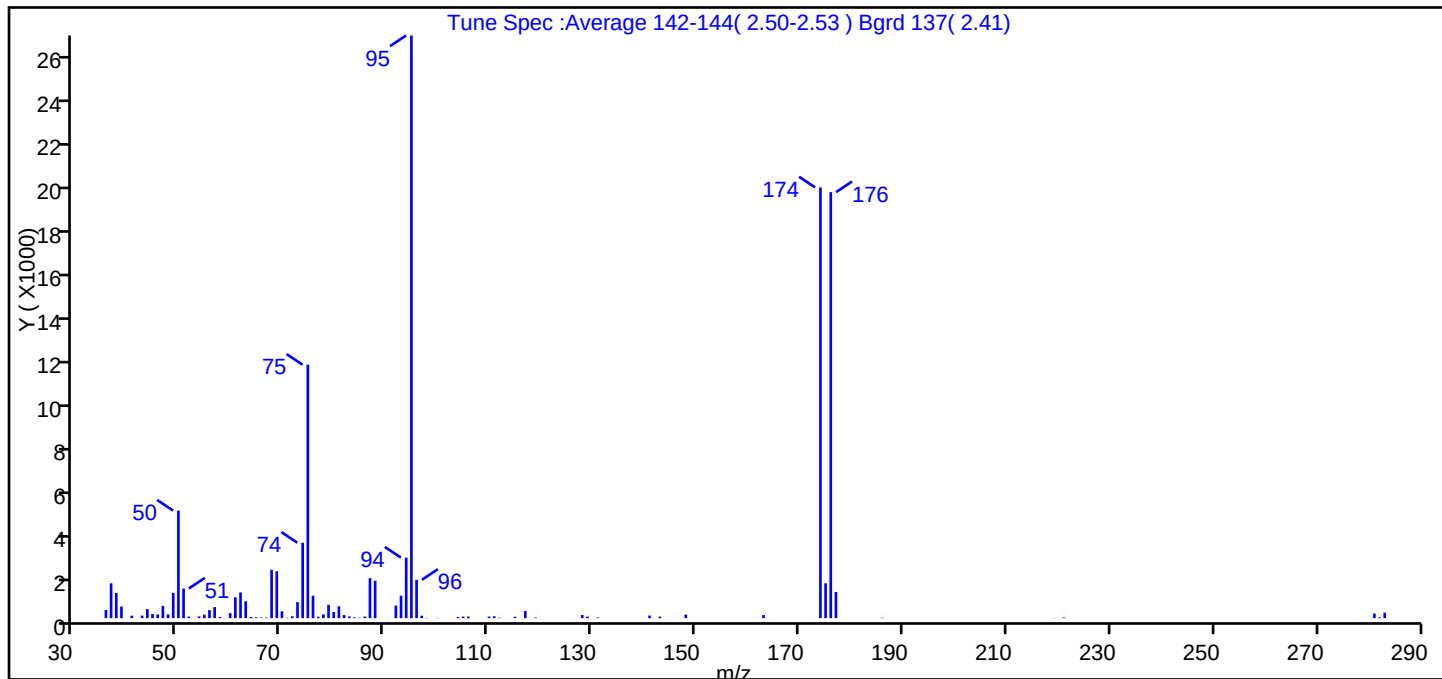
Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9955.D
Injection Date: 07-Oct-2016 21:00:30 Instrument ID: VMS_H
Lims ID: BFB
Client ID:
Operator ID: bergerb ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSH_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

\$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.5
75	30 to 60% of m/z 95	43.5
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.9
175	5 to 9% of m/z 174	6.0 (8.1)
176	Greater than 95% but less than 101% of m/z 174	73.1 (98.9)
177	5 to 9% of m/z 176	4.5 (6.1)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9955.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 07-Oct-2016 21:00:30
Spectrum: Tune Spec :Average 142-144(2.50-2.53) Bgrd 137(2.41)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 84

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	373	60.00	227	81.00	539	112.00	21
37.00	1590	61.00	954	82.00	142	115.00	61
38.00	1149	62.00	1173	83.00	78	117.00	322
39.00	529	63.00	770	84.00	37	119.00	28
41.00	112	64.00	53	85.00	22	128.00	145
43.00	115	65.00	42	86.00	74	129.00	70
44.00	411	66.00	29	87.00	1825	131.00	32
45.00	189	67.00	25	88.00	1709	141.00	119
46.00	171	68.00	2209	92.00	574	143.00	72
47.00	557	69.00	2140	93.00	1023	148.00	161
48.00	171	70.00	312	94.00	2760	163.00	145
49.00	1153	71.00	18	95.00	26576	174.00	19648
50.00	4905	72.00	83	96.00	1748	175.00	1588
51.00	1353	73.00	731	97.00	111	176.00	19432
52.00	68	74.00	3440	98.00	13	177.00	1194
54.00	78	75.00	11561	100.00	9	186.00	19
55.00	160	76.00	1021	104.00	51	219.00	7
56.00	367	77.00	65	105.00	72	221.00	30
57.00	504	78.00	167	106.00	74	281.00	210
58.00	48	79.00	608	110.00	69	282.00	39
59.00	12	80.00	281	111.00	86	283.00	250

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161007-51654.b\H9955.D

Injection Date: 07-Oct-2016 21:00:30

Instrument ID: VMS_H

Operator ID: bergerb

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

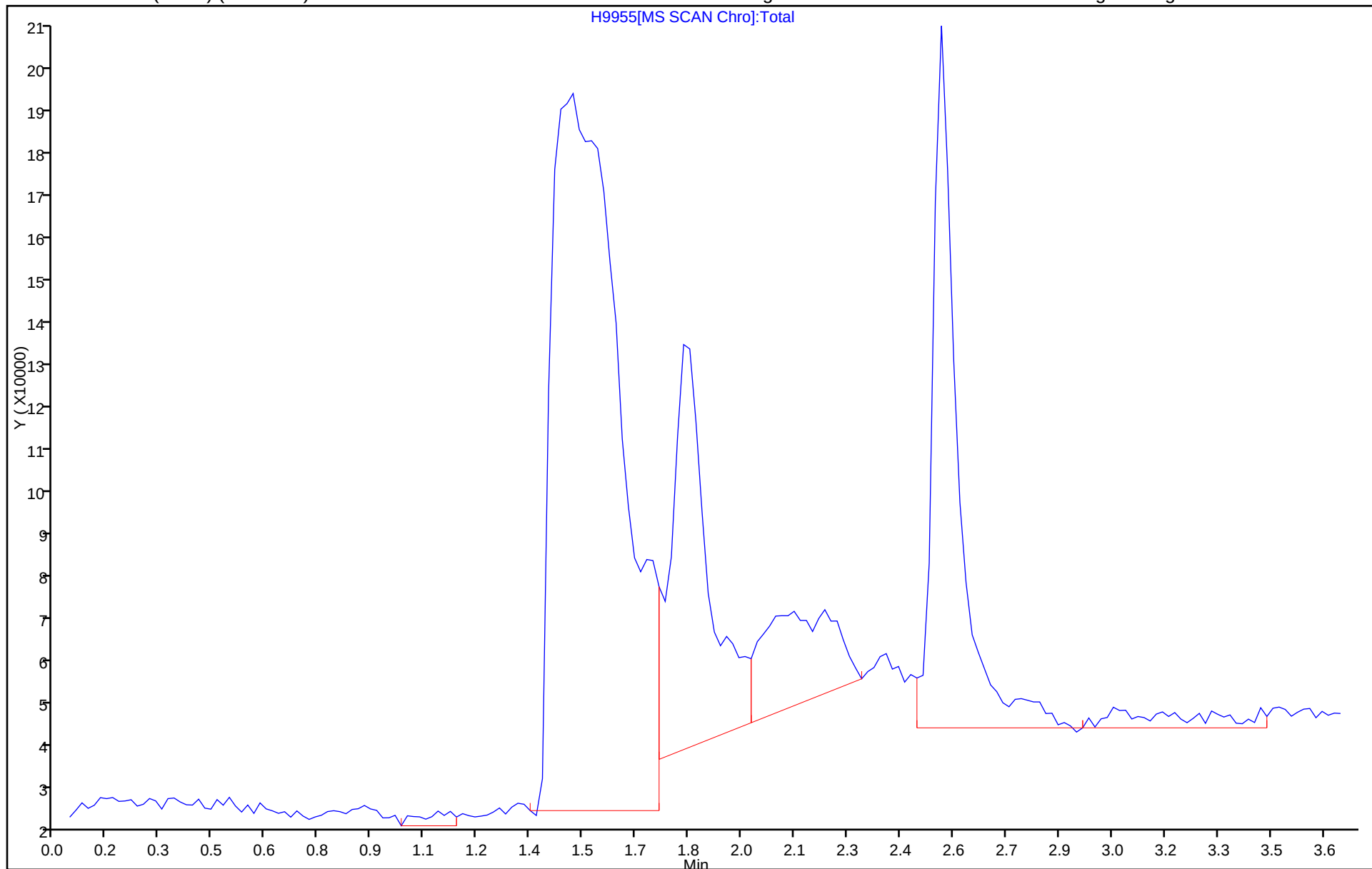
ALS Bottle#: 100

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1082.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 02-Nov-2016 10:27:30 ALS Bottle#: 98 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: moanm Instrument ID: VMS_H
Method: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 02-Nov-2016 15:59:34 Calib Date: 02-Nov-2016 13:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK033

First Level Reviewer: moanm

Date: 02-Nov-2016 10:34:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 7 BFB	95	2.532	2.532	0.000	85	280463	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00021

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1082.D

Injection Date: 02-Nov-2016 10:27:30

Instrument ID: VMS_H

Lims ID: BFB

Client ID:

Operator ID: moanm

ALS Bottle#: 98 Worklist Smp#: 1

Injection Vol: 1.0 uL

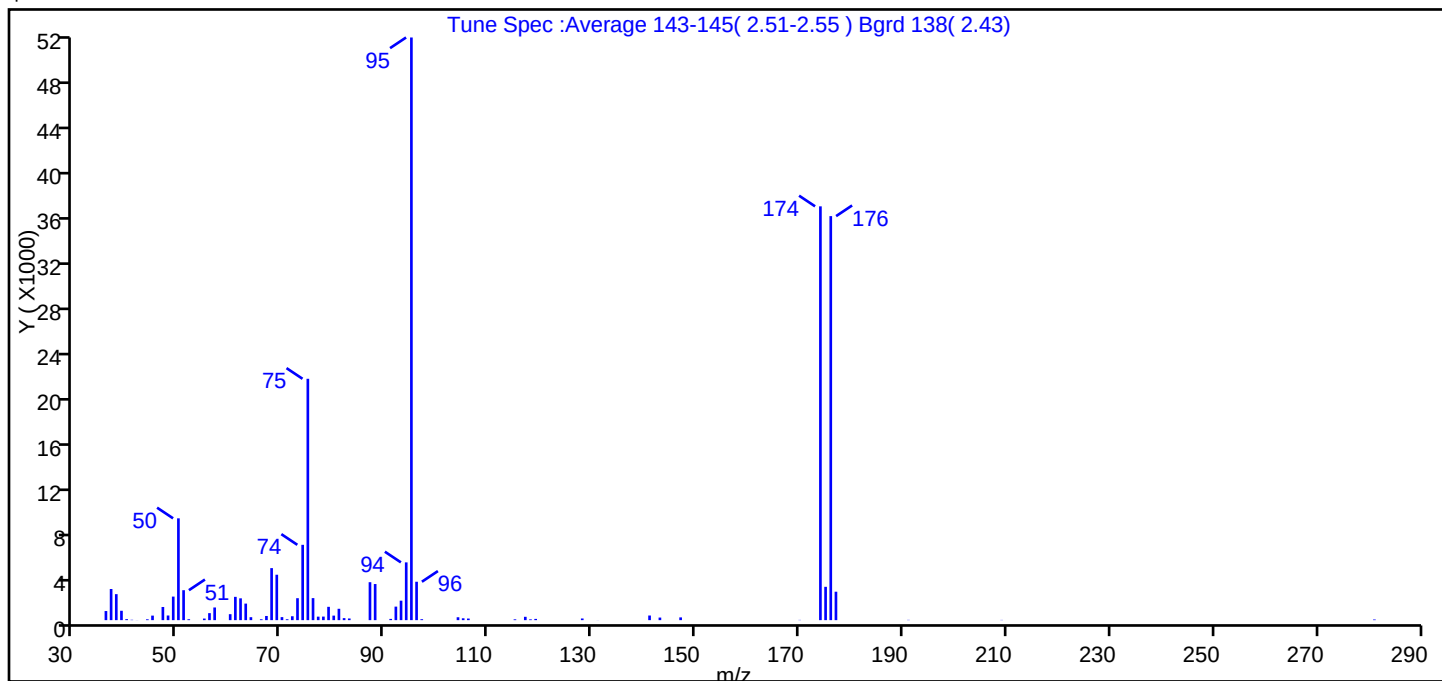
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.5
75	30 to 60% of m/z 95	41.4
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	71.0
175	5 to 9% of m/z 174	5.7 (8.1)
176	Greater than 95% but less than 101% of m/z 174	69.3 (97.6)
177	5 to 9% of m/z 176	4.9 (7.0)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1082.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 02-Nov-2016 10:27:30
Spectrum: Tune Spec :Average 143-145(2.51-2.55) Bgrd 138(2.43)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	812	60.00	532	79.00	1188	117.00	298
37.00	2777	61.00	2077	80.00	404	118.00	71
38.00	2318	62.00	1945	81.00	1013	119.00	111
39.00	836	63.00	1475	82.00	180	128.00	148
40.00	89	64.00	264	83.00	148	131.00	6
41.00	32	66.00	77	87.00	3383	141.00	412
42.00	7	67.00	371	88.00	3219	143.00	230
44.00	75	68.00	4639	91.00	111	147.00	246
45.00	404	69.00	4049	92.00	1206	170.00	21
47.00	1173	70.00	270	93.00	1736	174.00	36896
48.00	414	71.00	78	94.00	5151	175.00	2971
49.00	2100	72.00	347	95.00	51952	176.00	36024
50.00	9078	73.00	1957	96.00	3424	177.00	2535
51.00	2670	74.00	6716	97.00	83	191.00	24
52.00	80	75.00	21520	104.00	258	209.00	20
55.00	142	76.00	1964	105.00	165	281.00	57
56.00	625	77.00	312	106.00	142		
57.00	1129	78.00	317	115.00	72		

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1082.D

Injection Date: 02-Nov-2016 10:27:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

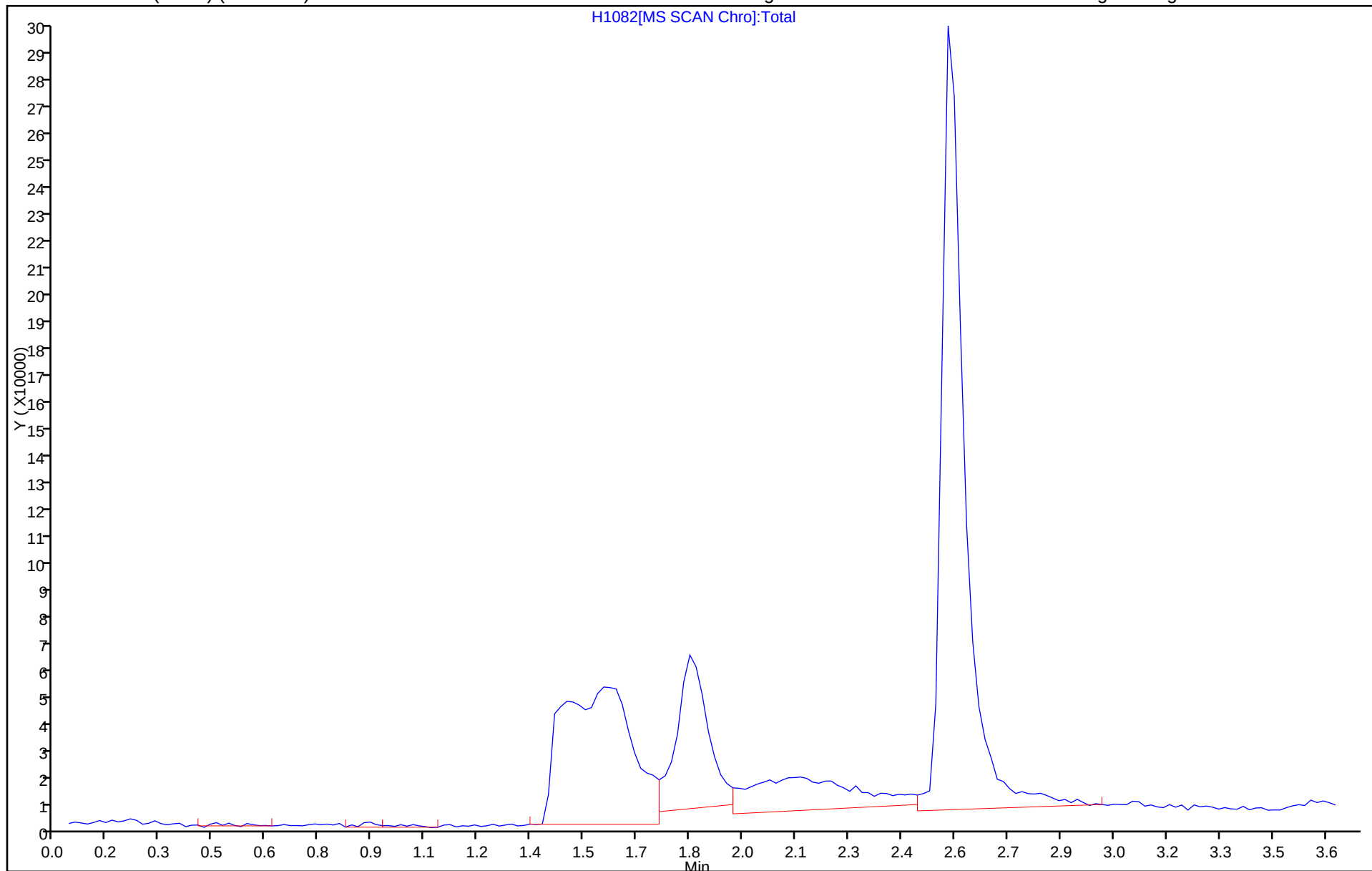
ALS Bottle#: 98

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1441.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 09-Nov-2016 06:52:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: bfb
Operator ID: moanm Instrument ID: VMS_H
Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 09-Nov-2016 15:18:26 Calib Date: 02-Nov-2016 13:22:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 07:25:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 7 BFB	95	2.469	2.469	0.000	90	288574	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00021

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1441.D

Injection Date: 09-Nov-2016 06:52:30

Instrument ID: VMS_H

Lims ID: BFB

Client ID:

Operator ID: moanm

ALS Bottle#: 100 Worklist Smp#: 1

Injection Vol: 1.0 uL

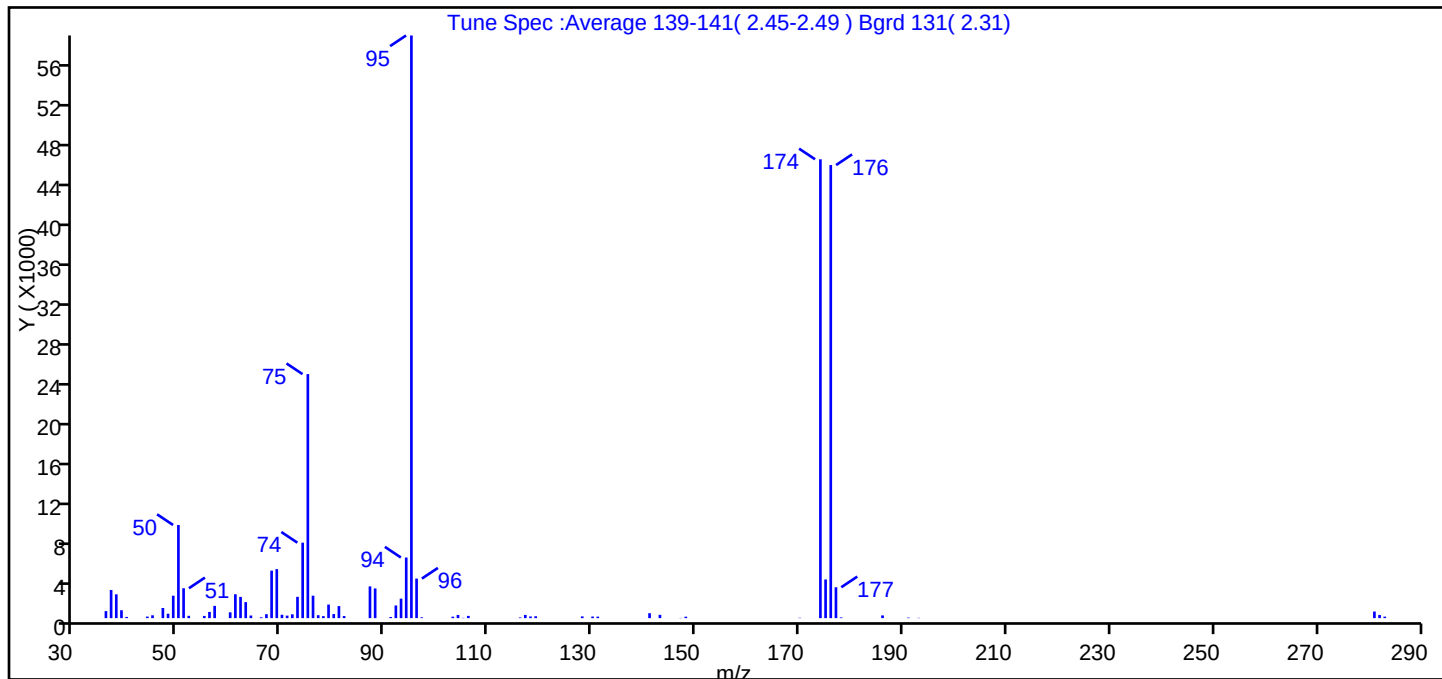
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 7 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.0
75	30 to 60% of m/z 95	41.9
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	78.7
175	5 to 9% of m/z 174	6.6 (8.4)
176	Greater than 95% but less than 101% of m/z 174	77.8 (98.7)
177	5 to 9% of m/z 176	5.3 (6.8)

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1441.D\AQ_VMSH_8260.rslt\spectra.d
Injection Date: 09-Nov-2016 06:52:30
Spectrum: Tune Spec :Average 139-141(2.45-2.49) Bgrd 131(2.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	704	63.00	1605	87.00	3180	130.00	161
37.00	2821	64.00	262	88.00	2975	131.00	151
38.00	2387	66.00	85	91.00	115	141.00	495
39.00	792	67.00	396	92.00	1271	143.00	333
40.00	124	68.00	4760	93.00	1952	147.00	22
44.00	157	69.00	4909	94.00	6072	148.00	146
45.00	287	70.00	339	95.00	58352	170.00	37
47.00	1016	71.00	254	96.00	3962	174.00	45952
48.00	443	72.00	381	97.00	82	175.00	3875
49.00	2246	73.00	2135	103.00	145	176.00	45376
50.00	9329	74.00	7559	104.00	318	177.00	3093
51.00	2993	75.00	24440	105.00	29	178.00	72
52.00	232	76.00	2248	106.00	226	186.00	275
55.00	222	77.00	296	115.00	6	191.00	52
56.00	622	78.00	201	116.00	68	193.00	29
57.00	1228	79.00	1359	117.00	325	281.00	662
60.00	582	80.00	407	118.00	166	282.00	320
61.00	2392	81.00	1208	119.00	189	283.00	150
62.00	2127	82.00	211	128.00	175		

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1441.D

Injection Date: 09-Nov-2016 06:52:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

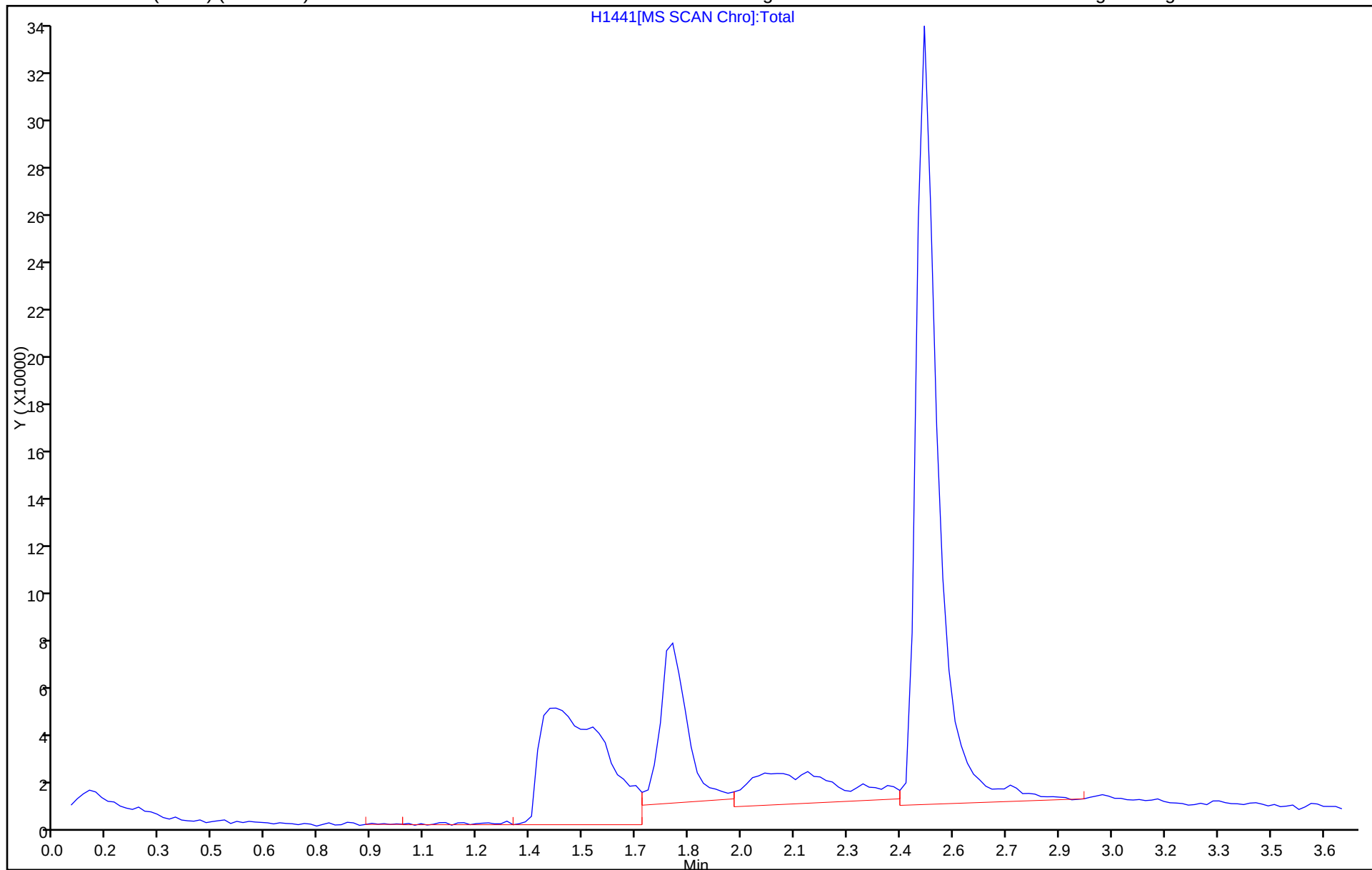
ALS Bottle#: 100

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1835.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 13-Sep-2016 08:16:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SEIFERTJ Instrument ID: VMS_P
Method: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 14-Sep-2016 16:47:06 Calib Date: 13-Sep-2016 13:53:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1851.D
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 4 BFB	95	5.001	5.001	0.000	0	76711	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00021

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1835.D

Injection Date: 13-Sep-2016 08:16:30

Instrument ID: VMS_P

Lims ID: BFB

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#: 100

Worklist Smp#: 1

Injection Vol: 1.0 uL

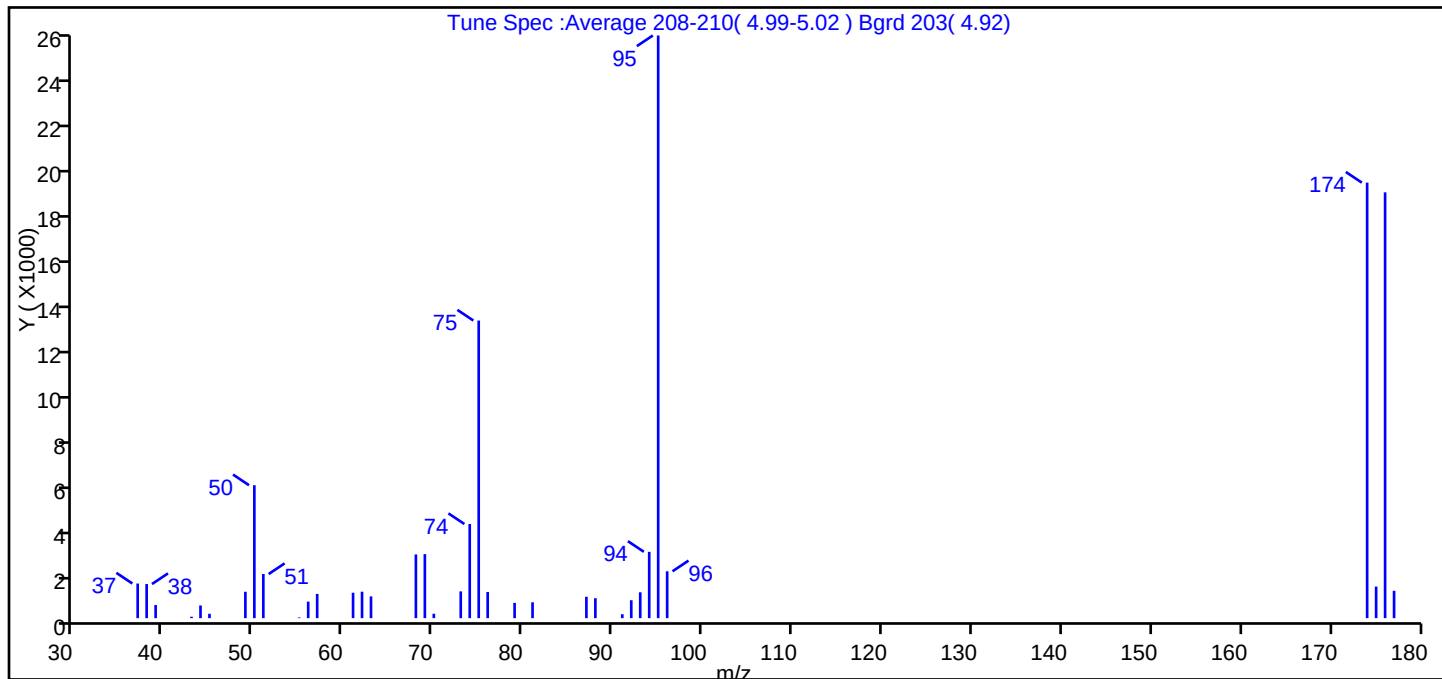
Dil. Factor: 1.0000

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.8
75	30 to 60% of m/z 95	51.1
96	5 to 9% of m/z 95	8.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	74.7
175	5 to 9% of m/z 174	5.4 (7.2)
176	Greater than 95% but less than 101% of m/z 174	73.1 (97.8)
177	5 to 9% of m/z 176	4.7 (6.4)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1835.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 13-Sep-2016 08:16:30
Spectrum: Tune Spec :Average 208-210(4.99-5.02) Bgrd 203(4.92)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 36

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1508	55.00	30	73.00	1166	92.00	780
38.00	1485	56.00	720	74.00	4099	93.00	1126
39.00	571	57.00	1056	75.00	12961	94.00	2888
43.00	62	61.00	1106	76.00	1138	95.00	25376
44.00	552	62.00	1152	79.00	665	96.00	2040
45.00	190	63.00	947	81.00	691	174.00	18968
49.00	1149	68.00	2773	87.00	931	175.00	1375
50.00	5789	69.00	2789	88.00	868	176.00	18544
51.00	1921	70.00	192	91.00	172	177.00	1192

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20160913-50805.b\P1835.D

Injection Date: 13-Sep-2016 08:16:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

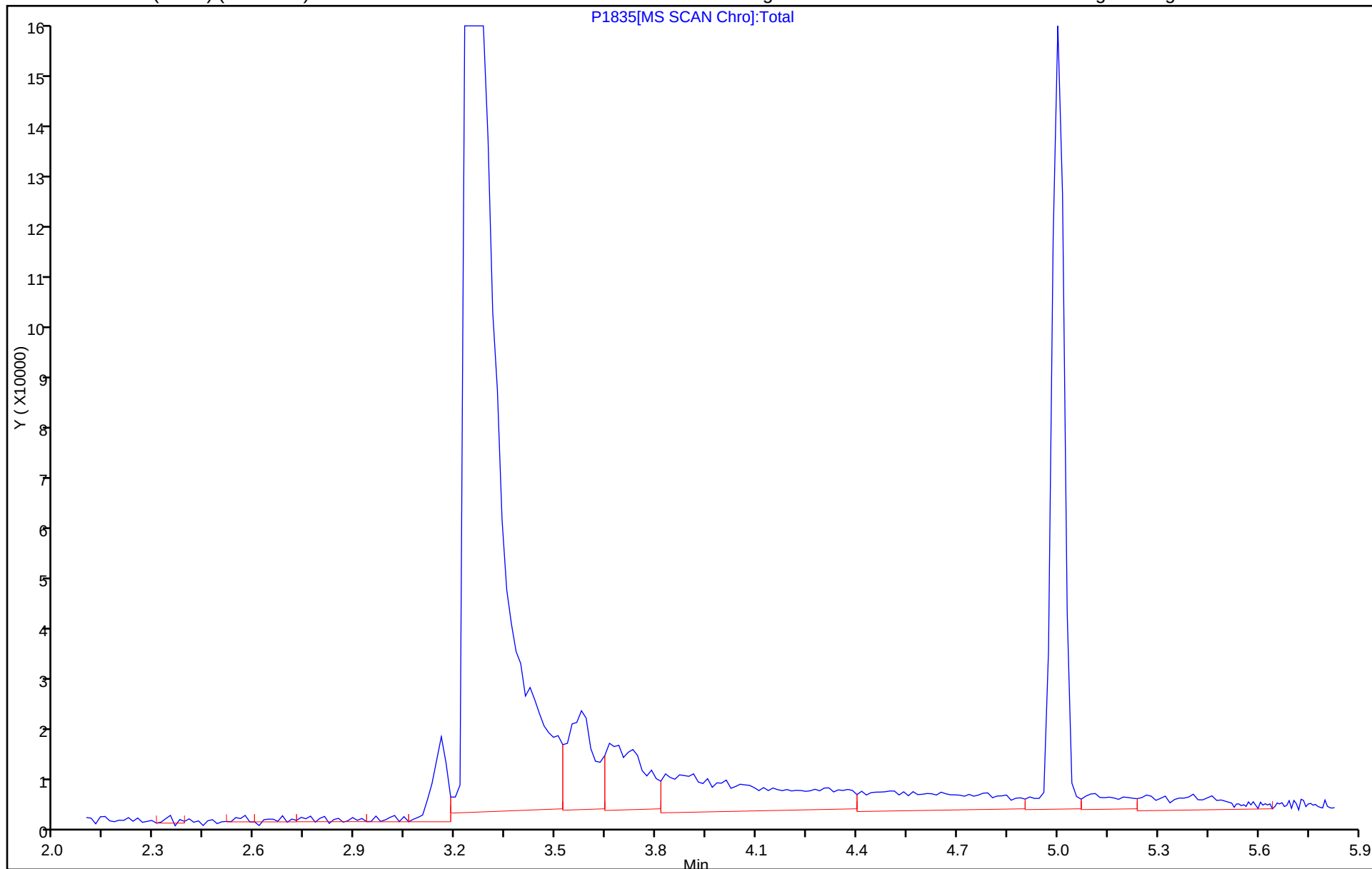
ALS Bottle#: 100

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2898.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 20-Oct-2016 08:31:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SEIFERTJ Instrument ID: VMS_P
Method: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 20-Oct-2016 16:26:15 Calib Date: 20-Oct-2016 11:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2906.D
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK002

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 4 BFB	95	4.971	4.971	0.000	0	119445	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00021

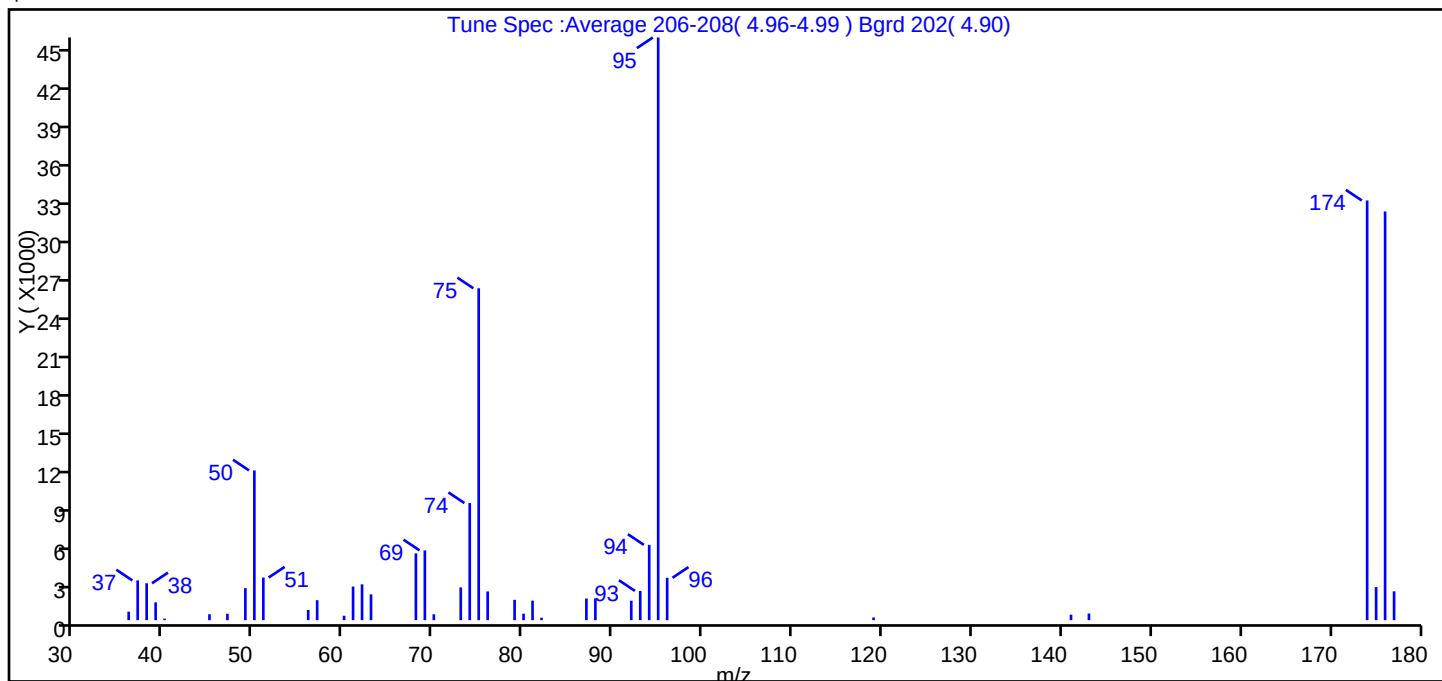
Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2898.D
Injection Date: 20-Oct-2016 08:31:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

\$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.7
75	30 to 60% of m/z 95	57.0
96	5 to 9% of m/z 95	7.3
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	72.0
175	5 to 9% of m/z 174	5.7 (7.9)
176	Greater than 95% but less than 101% of m/z 174	70.1 (97.4)
177	5 to 9% of m/z 176	4.9 (7.0)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\IP2898.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 20-Oct-2016 08:31:30
Spectrum: Tune Spec :Average 206-208(4.96-4.99) Bgrd 202(4.90)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 41

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	664	57.00	1562	76.00	2242	96.00	3312
37.00	3106	60.00	344	79.00	1585	119.00	209
38.00	2882	61.00	2624	80.00	505	141.00	428
39.00	1391	62.00	2801	81.00	1526	143.00	520
40.00	118	63.00	2013	82.00	191	174.00	32808
45.00	461	68.00	5217	87.00	1690	175.00	2584
47.00	497	69.00	5455	88.00	1697	176.00	31952
49.00	2504	70.00	456	92.00	1519	177.00	2252
50.00	11705	73.00	2560	93.00	2287		
51.00	3330	74.00	9154	94.00	5884		
56.00	795	75.00	25944	95.00	45552		

Report Date: 20-Oct-2016 16:26:15

Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161020-52083.b\P2898.D

Injection Date: 20-Oct-2016 08:31:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

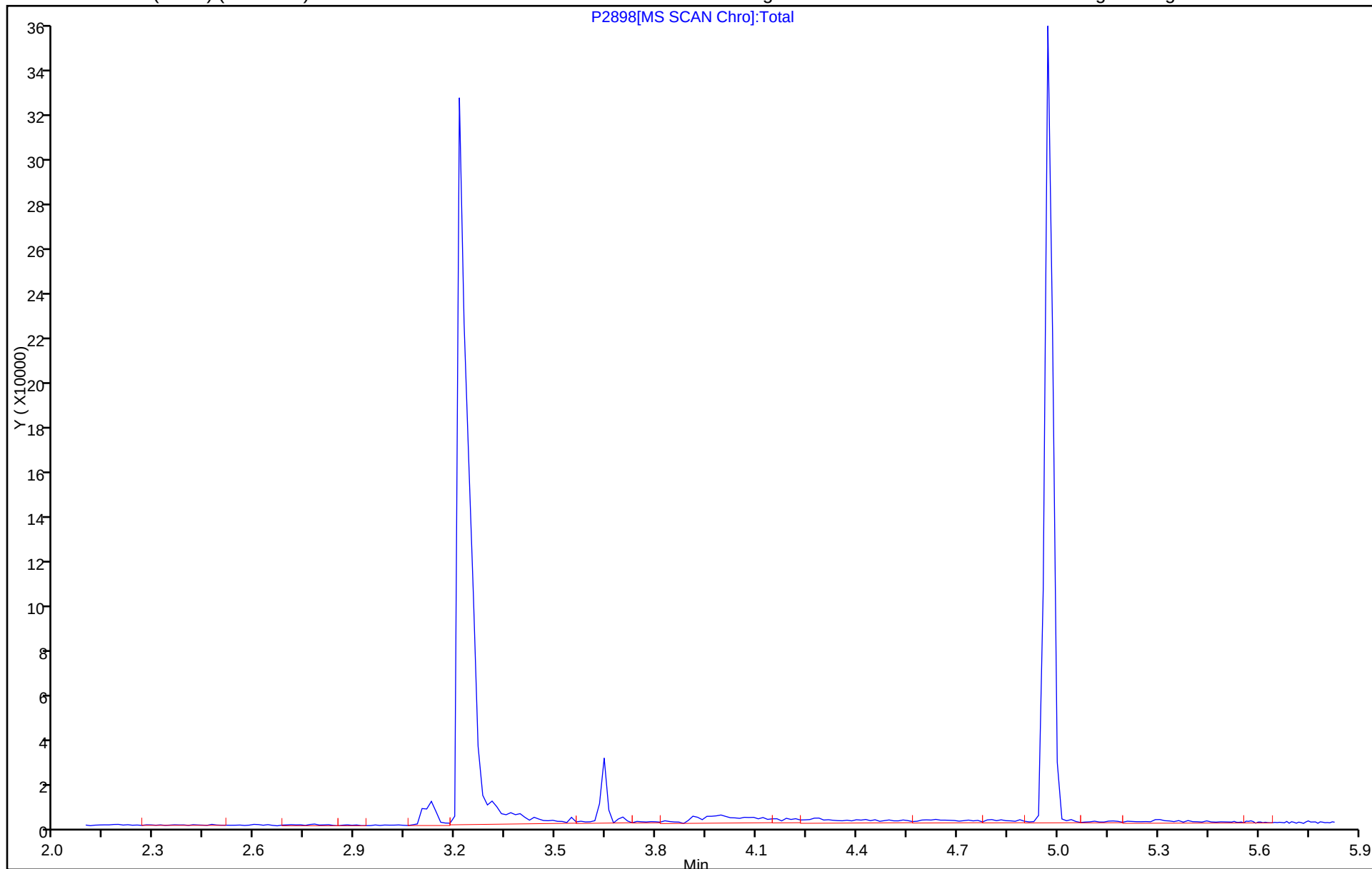
ALS Bottle#: 100

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3691.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 07-Nov-2016 08:28:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SEIFERTJ Instrument ID: VMS_P
Method: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 07-Nov-2016 15:10:54 Calib Date: 07-Nov-2016 12:50:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK027

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 4 BFB	95	4.986	4.986	0.000	0	398664	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00021

Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3691.D

Injection Date: 07-Nov-2016 08:28:30

Instrument ID: VMS_P

Lims ID: BFB

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#: 100

Worklist Smp#: 1

Injection Vol: 1.0 uL

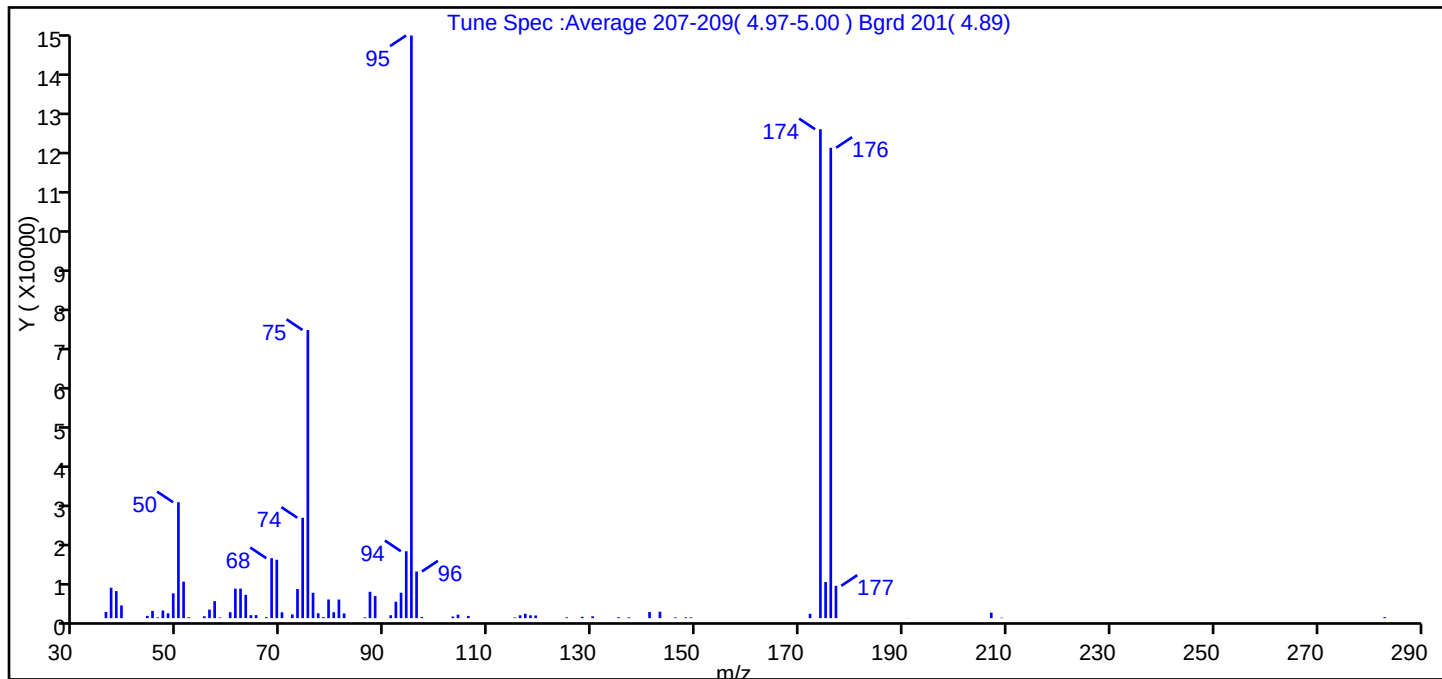
Dil. Factor: 1.0000

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Tune Method: BFB Method 8260

\$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.9
75	30 to 60% of m/z 95	49.5
96	5 to 9% of m/z 95	8.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	83.9
175	5 to 9% of m/z 174	6.2 (7.4)
176	Greater than 95% but less than 101% of m/z 174	80.7 (96.2)
177	5 to 9% of m/z 176	5.5 (6.9)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\3691.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 07-Nov-2016 08:28:30
Spectrum: Tune Spec :Average 207-209(4.97-5.00) Bgrd 201(4.89)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1533	62.00	7281	86.00	195	128.00	330
37.00	7499	63.00	5751	87.00	6493	130.00	452
38.00	6668	64.00	733	88.00	5440	135.00	226
39.00	3124	65.00	755	91.00	716	137.00	193
44.00	561	67.00	250	92.00	4052	141.00	1506
45.00	1785	68.00	14777	93.00	6268	143.00	1591
46.00	186	69.00	14393	94.00	16496	146.00	176
47.00	1887	70.00	1445	95.00	143616	148.00	197
48.00	1203	72.00	900	96.00	11498	149.00	189
49.00	6120	73.00	7189	97.00	277	172.00	1073
50.00	28568	74.00	24736	103.00	398	174.00	120504
51.00	8997	75.00	71024	104.00	856	175.00	8903
52.00	227	76.00	6245	106.00	549	176.00	115936
55.00	458	77.00	1206	115.00	176	177.00	7969
56.00	2113	78.00	244	116.00	702	191.00	36
57.00	4183	79.00	4605	117.00	1074	207.00	1346
58.00	166	80.00	1454	118.00	708	209.00	119
60.00	1456	81.00	4582	119.00	660	283.00	257
61.00	7255	82.00	1150	125.00	199		

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3691.D

Injection Date: 07-Nov-2016 08:28:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

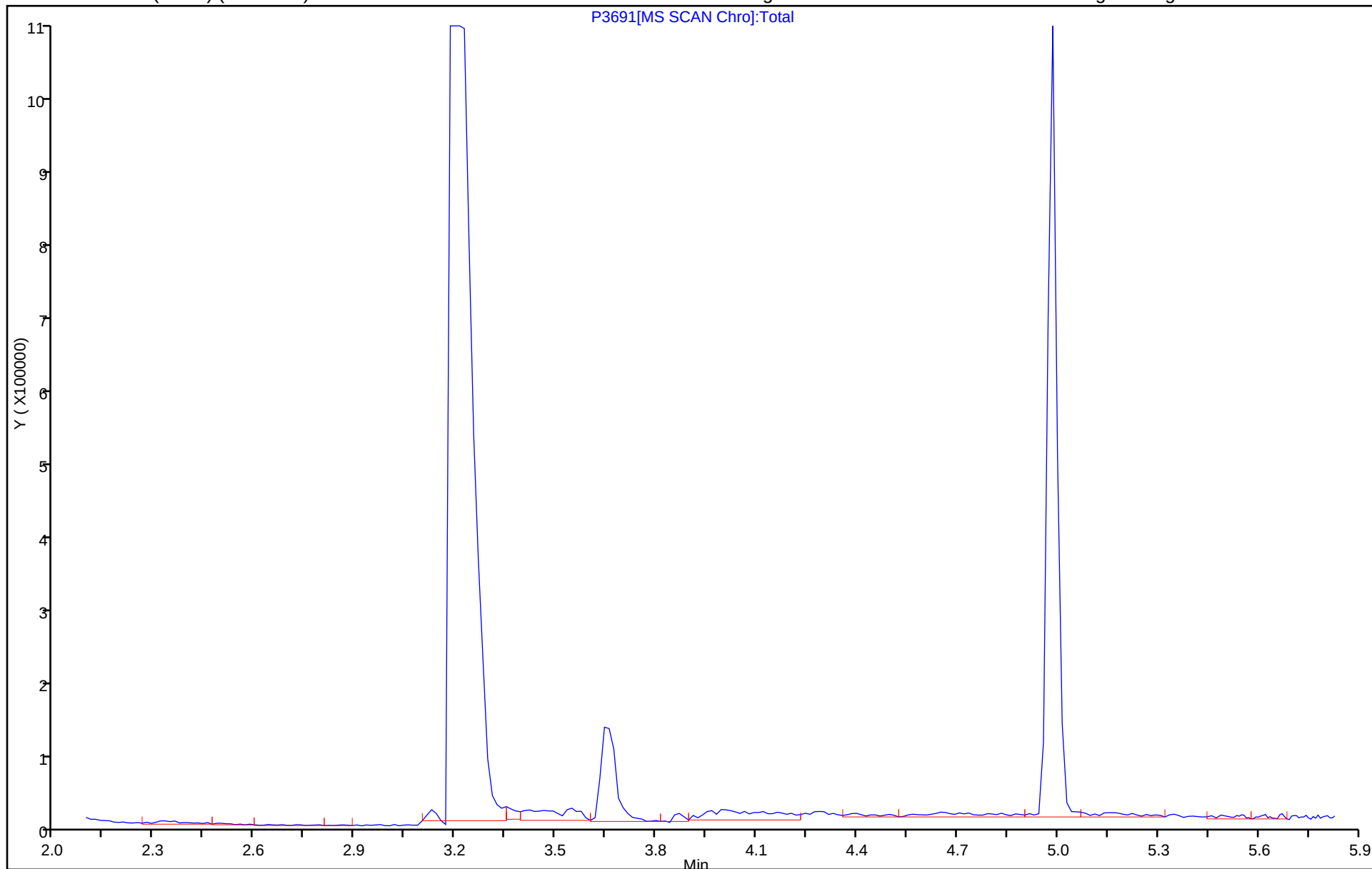
ALS Bottle#: 100

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3843.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 10-Nov-2016 07:45:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SEIFERTJ Instrument ID: VMS_P
Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Nov-2016 09:54:19 Calib Date: 07-Nov-2016 12:50:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK007

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 4 BFB	95	4.970	4.970	0.000	0	439697	NR	NR	7

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

7 - Failed Limit of Detection

Reagents:

MV-BFB_00021

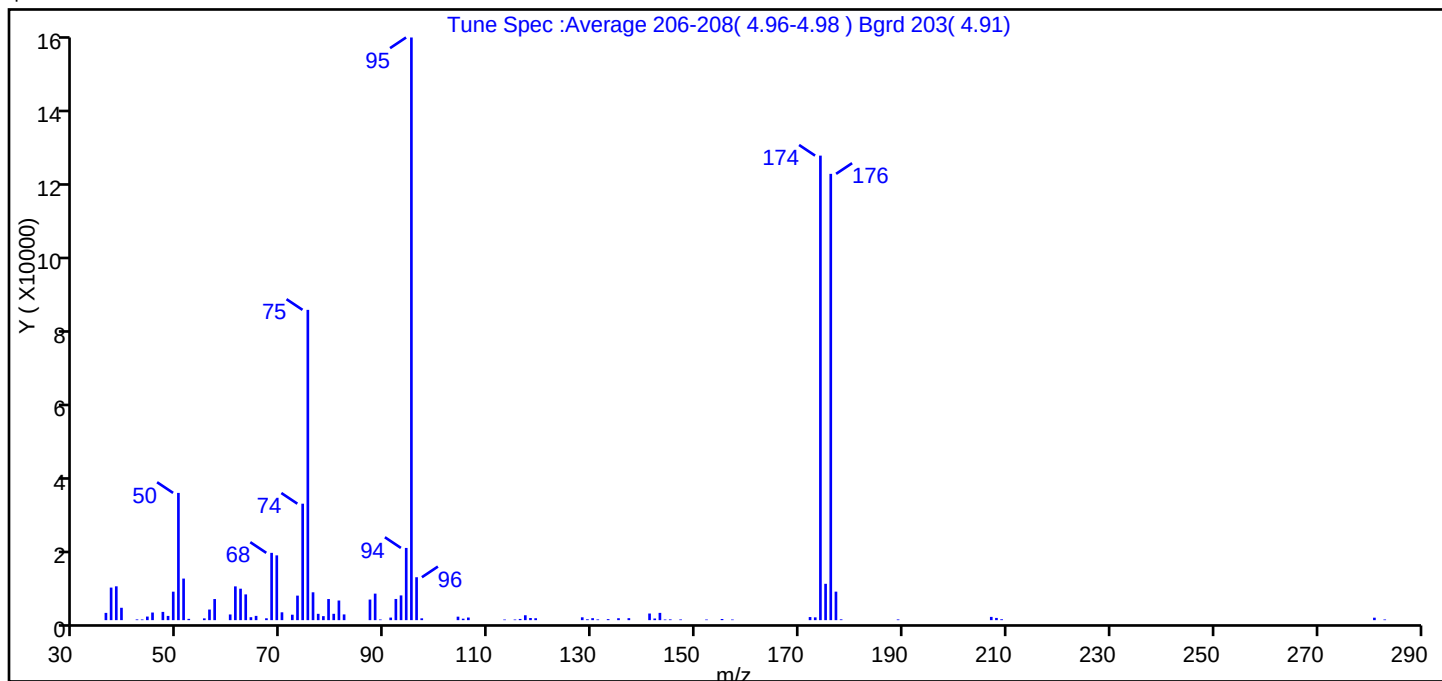
Amount Added: 1.00

Units: uL

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3843.D
Injection Date: 10-Nov-2016 07:45:30 Instrument ID: VMS_P
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSP_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

\$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.8
75	30 to 60% of m/z 95	53.3
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	79.7
175	5 to 9% of m/z 174	6.2 (7.8)
176	Greater than 95% but less than 101% of m/z 174	76.6 (96.1)
177	5 to 9% of m/z 176	4.9 (6.4)

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\3843.D\AQ_VMSP_8260.rslt\spectra.d
Injection Date: 10-Nov-2016 07:45:30
Spectrum: Tune Spec :Average 206-208(4.96-4.98) Bgrd 203(4.91)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1993	65.00	1169	94.00	19816	143.00	1994
37.00	8935	67.00	507	95.00	159872	144.00	176
38.00	9281	68.00	18464	96.00	11776	145.00	210
39.00	3395	69.00	17776	97.00	498	147.00	190
42.00	199	70.00	2151	104.00	954	152.00	172
43.00	187	72.00	1495	105.00	402	155.00	315
44.00	982	73.00	6731	106.00	720	157.00	169
45.00	2089	74.00	31952	113.00	168	172.00	849
47.00	2261	75.00	85136	115.00	172	173.00	763
48.00	1158	76.00	7641	116.00	327	174.00	127456
49.00	7814	77.00	1734	117.00	1341	175.00	9971
50.00	34912	78.00	1096	118.00	588	176.00	122456
51.00	11404	79.00	5793	119.00	523	177.00	7820
52.00	353	80.00	1741	128.00	778	178.00	217
55.00	487	81.00	5387	129.00	237	189.00	193
56.00	2909	82.00	1573	130.00	545	207.00	893
57.00	5790	87.00	5650	131.00	202	208.00	610
60.00	1560	88.00	7276	133.00	278	209.00	241
61.00	9265	89.00	177	135.00	525	281.00	675
62.00	8628	91.00	702	137.00	537	283.00	185
63.00	7065	92.00	5811	141.00	1818		
64.00	808	93.00	6784	142.00	446		

Report Date: 11-Nov-2016 09:54:19

Chrom Revision: 2.2 01-Nov-2016 11:37:52

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3843.D

Injection Date: 10-Nov-2016 07:45:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

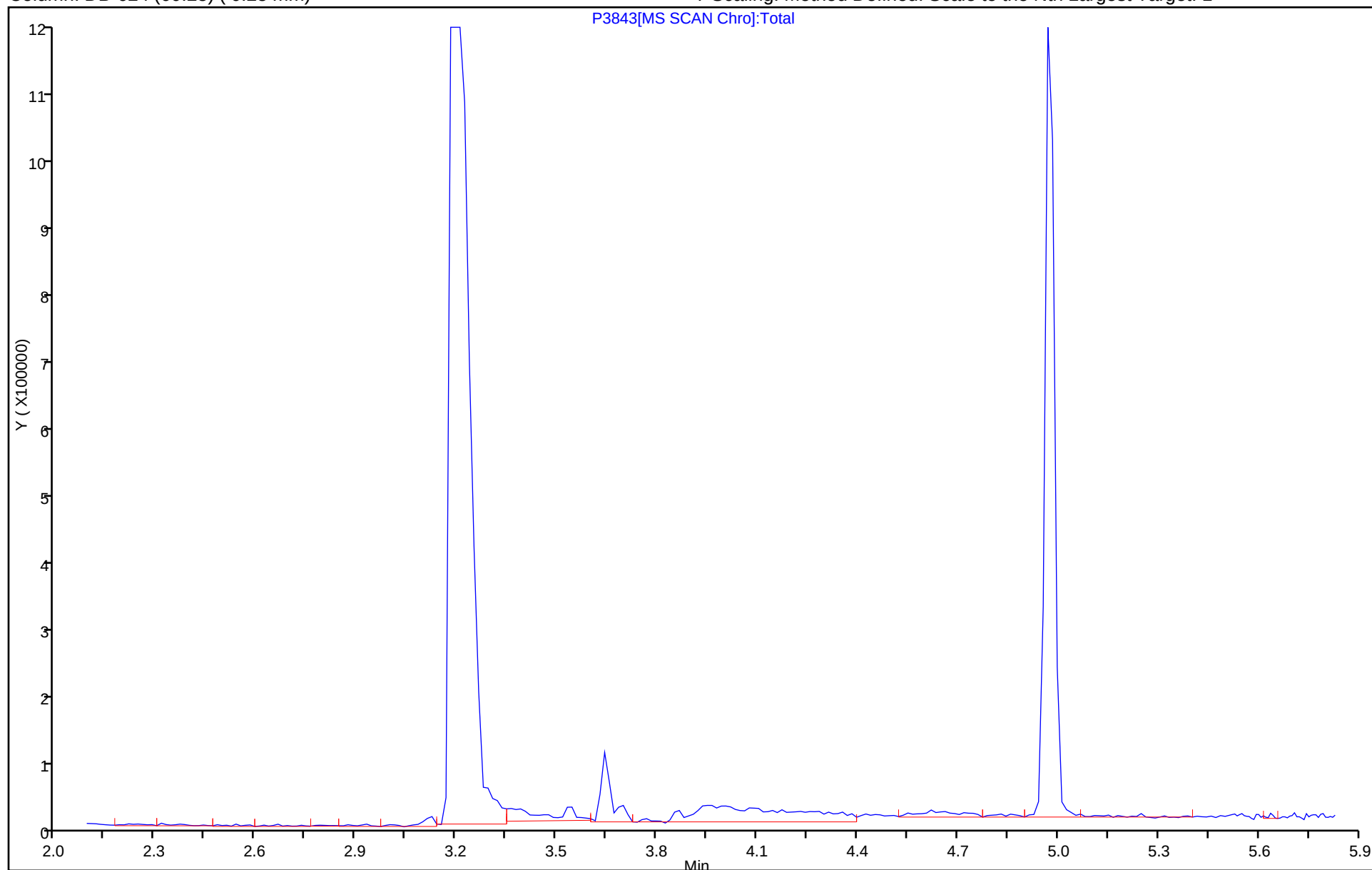
ALS Bottle#: 100

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 280-350526/6

Matrix: Water Lab File ID: H1446.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 11/09/2016 08:40

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 350526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	1.84	J	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: MB 280-350526/6
Matrix: Water Lab File ID: H1446.D
Analysis Method: 8260B Date Collected: _____
Sample wt/vol: 20 (mL) Date Analyzed: 11/09/2016 08:40
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 350526 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	111		80-119
2037-26-5	Toluene-d8 (Surr)	93		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1446.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 09-Nov-2016 08:40:30 ALS Bottle#: 5 Worklist Smp#: 6
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: mb
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:41 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 09:00:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.999	3.979	0.020	96	233197	250.0	250.0	
* 2 Fluorobenzene	96	6.751	6.748	0.003	99	1218022	12.5	12.5	
* 3 1,4-Dioxane-d8	96		8.670					ND	
* 4 Chlorobenzene-d5	119	11.088	11.084	0.004	85	333332	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.083	14.097	-0.014	94	546033	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.933	5.929	0.004	94	615670	9.75	10.8	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.333	6.347	-0.014	96	225538	9.75	9.66	
\$ 10 Toluene-d8 (Surr)	98	8.858	8.855	0.003	92	1357406	9.75	9.06	
\$ 11 4-Bromofluorobenzene (Surr	95	12.742	12.756	-0.014	92	701330	9.75	9.42	
\$ 152 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 7 BFB	95		2.469					ND	
28 Dichlorodifluoromethane	85		2.152					ND	
27 Chlorotrifluoroethene	116		2.173					ND	
30 Chloromethane	50		2.256					ND	
29 1,2-Dichloro-1,1,2,2-tetra	85		2.329					ND	
32 Vinyl chloride	62		2.396					ND	
33 2-Chloro-1,1,1-Trifluoroet	118		2.521					ND	
34 Ethylene oxide	43		2.655					ND	
35 Bromomethane	94		2.674					ND	
36 Chloroethane	64		2.761					ND	
37 Dichlorofluoromethane	67		2.935					ND	
38 Trichlorofluoromethane	101		2.988					ND	
39 Ethanol	45		3.177					ND	
40 Ethyl ether	59		3.214					ND	
43 Propene oxide	58		3.317					ND	
41 1,2-Dichloro-1,1,2-trifluo	117		3.322					ND	
44 Acrolein	56		3.371					ND	
42 1,1,1-Trifluoro-2,2-dichlo	83		3.374					ND	
45 1,1-Dichloroethene	96		3.475					ND	
46 1,1,2-Trichloro-1,2,2-trif	151		3.493					ND	
47 Acetone	43		3.510					ND	
49 Isopropyl alcohol	45		3.527					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Iodomethane	142		3.649					ND	
50 Carbon disulfide	76		3.719					ND	
51 Acetonitrile	41		3.822					ND	
53 Methyl acetate	43		3.824					ND	
52 3-Chloro-1-propene	41		3.824					ND	
54 Methylene Chloride	84	3.965	3.946	0.019	96	61944		1.84	
55 2-Methyl-2-propanol	59		4.067					ND	
57 Acrylonitrile	53		4.207					ND	
56 Methyl tert-butyl ether	73		4.242					ND	
58 trans-1,2-Dichloroethene	96		4.242					ND	
59 Hexane	57		4.503					ND	
60 1,1-Dichloroethane	63		4.694					ND	
61 Vinyl acetate	43		4.712					ND	
62 Isopropyl ether	87		4.745					ND	
63 2-Chloro-1,3-butadiene	53		4.797					ND	
64 Tert-butyl ethyl ether	59		5.163					ND	
67 2-Butanone (MEK)	43		5.356					ND	
65 cis-1,2-Dichloroethene	96		5.356					ND	
66 2,2-Dichloropropane	77		5.374					ND	
69 Ethyl acetate	43		5.407					ND	
70 Propionitrile	54		5.459					ND	
71 sec-Butyl Alcohol	45		5.583					ND	
72 Methacrylonitrile	41		5.616					ND	
73 Chlorobromomethane	128		5.652					ND	
74 Tetrahydrofuran	42		5.705					ND	
75 Chloroform	83		5.722					ND	
76 1,1,1-Trichloroethane	97		5.966					ND	
77 Cyclohexane	56		6.035					ND	
78 1,1-Dichloropropene	75		6.157					ND	
79 Carbon tetrachloride	117		6.175					ND	
80 Isobutyl alcohol	41		6.279					ND	
81 Benzene	78		6.419					ND	
82 1,2-Dichloroethane	62		6.436					ND	
83 Tert-amyl methyl ether	73		6.539					ND	
84 n-Heptane	43		6.715					ND	
85 n-Butanol	56		7.148					ND	
86 Trichloroethene	95		7.220					ND	
88 2-Pentanone	43		7.446					ND	
89 Methylcyclohexane	55		7.481					ND	
90 1,2-Dichloropropane	63		7.516					ND	
91 Methyl methacrylate	100		7.653					ND	
92 Dibromomethane	93		7.690					ND	
93 1,4-Dioxane	88		7.707					ND	
94 Dichlorobromomethane	83		7.882					ND	
95 2-Nitropropane	41		8.193					ND	
96 2-Chloroethyl vinyl ether	63		8.282					ND	
97 cis-1,3-Dichloropropene	75		8.491					ND	
98 4-Methyl-2-pentanone (MIBK)	43		8.700					ND	
99 Toluene	91		8.961					ND	
100 trans-1,3-Dichloropropene	75		9.257					ND	
101 Ethyl methacrylate	69		9.397					ND	
102 1,1,2-Trichloroethane	97		9.536					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Tetrachloroethene	164		9.745					ND	
104 1,3-Dichloropropane	76		9.780					ND	
105 2-Hexanone	43		9.902					ND	
107 Tetrahydrothiophene	60		10.109					ND	
108 Chlorodibromomethane	129		10.128					ND	
109 Ethylene Dibromide	107		10.320					ND	
110 1-Chlorohexane	91		11.086					ND	
111 Chlorobenzene	112		11.138					ND	
112 1,1,1,2-Tetrachloroethane	131		11.260					ND	
113 Ethylbenzene	106		11.295					ND	
114 m-Xylene & p-Xylene	106		11.487					ND	
115 o-Xylene	106		12.061					ND	
116 Styrene	104		12.079					ND	
117 Bromoform	173		12.340					ND	
118 Isopropylbenzene	105		12.549					ND	
119 cis-1,4-Dichloro-2-butene	53		12.652					ND	
120 Cyclohexanone	55		12.688					ND	
122 Bromobenzene	156		12.932					ND	
121 1,1,2,2-Tetrachloroethane	83		12.932					ND	
123 1,2,3-Trichloropropane	110		12.984					ND	
124 trans-1,4-Dichloro-2-buten	53		13.002					ND	
125 N-Propylbenzene	120		13.071					ND	
126 2-Chlorotoluene	126		13.159					ND	
127 1,3,5-Trimethylbenzene	105		13.280					ND	
128 4-Chlorotoluene	126		13.298					ND	
129 tert-Butylbenzene	119		13.646					ND	
22 Pentachloroethane	167		13.716					ND	
130 1,2,4-Trimethylbenzene	105		13.716					ND	
131 sec-Butylbenzene	134		13.890					ND	
132 1,3-Dichlorobenzene	146		14.012					ND	
133 4-Isopropyltoluene	119		14.064					ND	
134 1,4-Dichlorobenzene	146		14.116					ND	
135 1,2,3-Trimethylbenzene	105		14.167					ND	
137 n-Butylbenzene	91		14.482					ND	
138 1,2-Dichlorobenzene	146		14.500					ND	
139 1,2-Dibromo-3-Chloropropan	157		15.283					ND	
140 1,3,5-Trichlorobenzene	180		15.491					ND	
141 1,2,4-Trichlorobenzene	180		16.050					ND	
142 Hexachlorobutadiene	225		16.206					ND	
143 Naphthalene	128		16.276					ND	
144 1,2,3-Trichlorobenzene	180		16.502					ND	
21 2,4-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
12 3-Ethylpentane	1		0.000					ND	
24 3-Methylhexane	1		0.000					ND	
19 2,3-Dimethylpentane	1		0.000					ND	
13 n-Nonyl Aldehyde	1		0.000					ND	
18 2,2-Dimethylpentane	1		0.000					ND	
23 2-Methylhexane	1		0.000					ND	
14 2-Butoxyethanol TIC	1		0.000					ND	
16 3,3-Dimethylpentane	1		0.000					ND	
17 2,2,3-Trimethylbutane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 151 1,2-Dichloroethene, Total	96		2.000					ND	
S 149 1,2-Dichloroethene, Total	1		0.000					ND	
S 150 Xylenes, Total	106		0.000					ND	
S 160 TAH	1				0			0	
S 148 1,3-Dichloropropene, Total	1		0.000					ND	
S 145 Trihalomethanes, Total	1		0.000					ND	
S 146 Xylenes, Total (URS)	1		0.000					ND	
S 147 Total BTEX	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 161 n-Nonane TIC	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	
T 26 2,3-dichloro-1-propene TIC	75		0.000					ND	
T 25 Dichloroacetonitrile TIC	74		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 68 Propene oxide TIC	58		0.000					ND	

Reagents:

MV-568718-D_00006

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00074

Amount Added: 0.78

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1446.D

Injection Date: 09-Nov-2016 08:40:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: MB

Worklist Smp#: 6

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

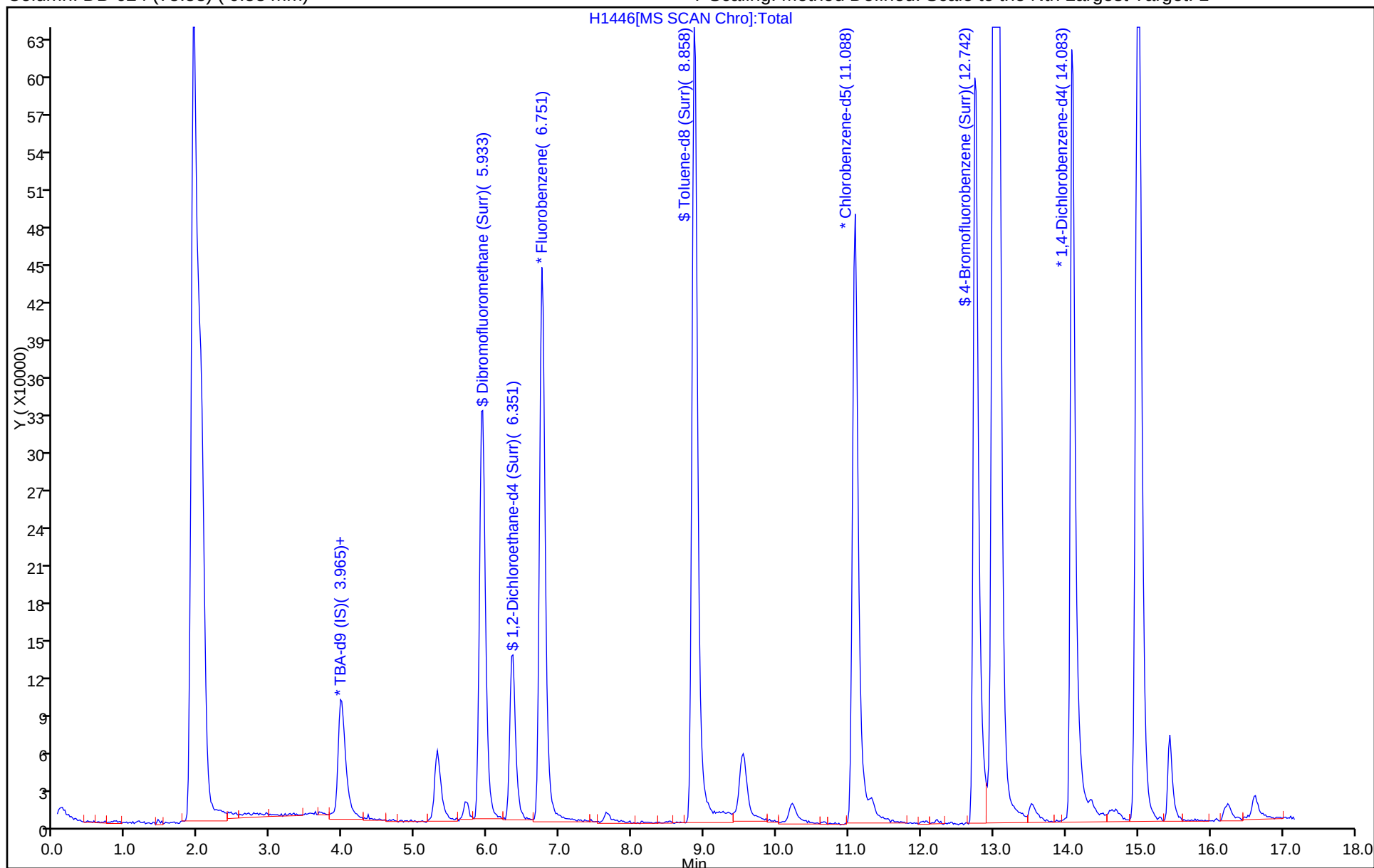
ALS Bottle#: 5

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1446.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 09-Nov-2016 08:40:30 ALS Bottle#: 5 Worklist Smp#: 6
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: mb
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:41 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 09:00:15

Compound	Amount Added	Amount Recovered	% Rec.
\$ 8 Dibromofluoromethane (Surr)	9.75	10.8	110.61
\$ 9 1,2-Dichloroethane-d4 (Surr)	9.75	9.66	99.11
\$ 10 Toluene-d8 (Surr)	9.75	9.06	92.94
\$ 11 4-Bromofluorobenzene (Surr)	9.75	9.42	96.59

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1446.D

Injection Date: 09-Nov-2016 08:40:30

Instrument ID: VMS_H

Lims ID: MB

Client ID:

Operator ID: moanm

ALS Bottle#: 5

Worklist Smp#: 6

Purge Vol: 20.000 mL

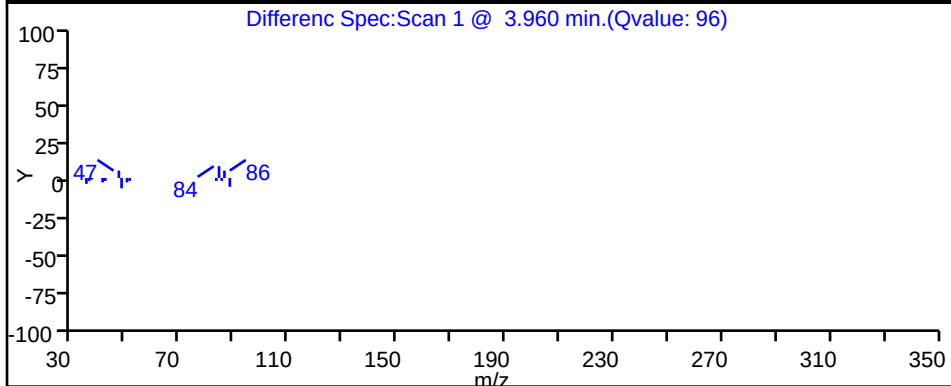
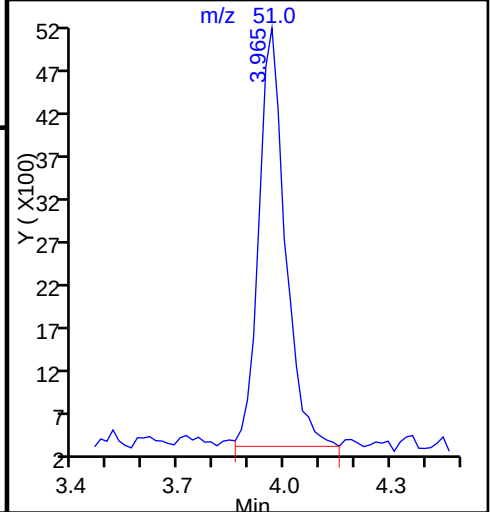
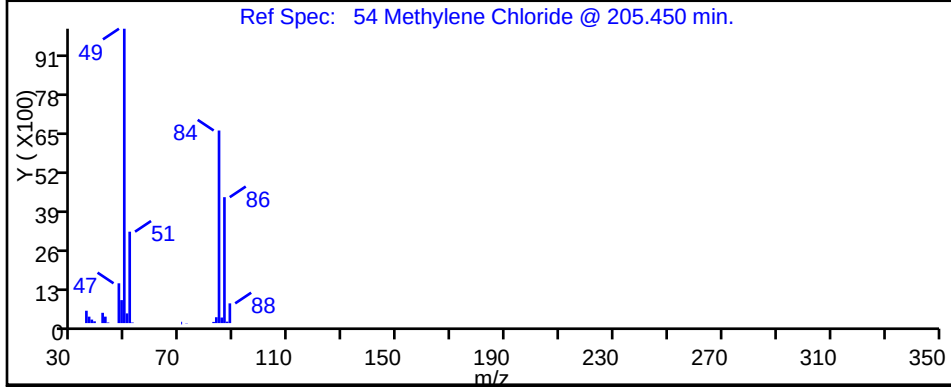
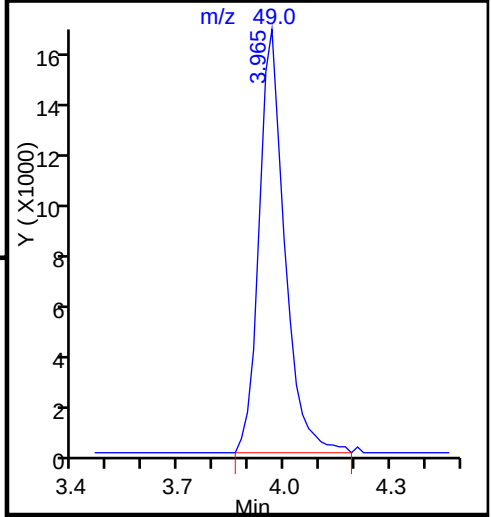
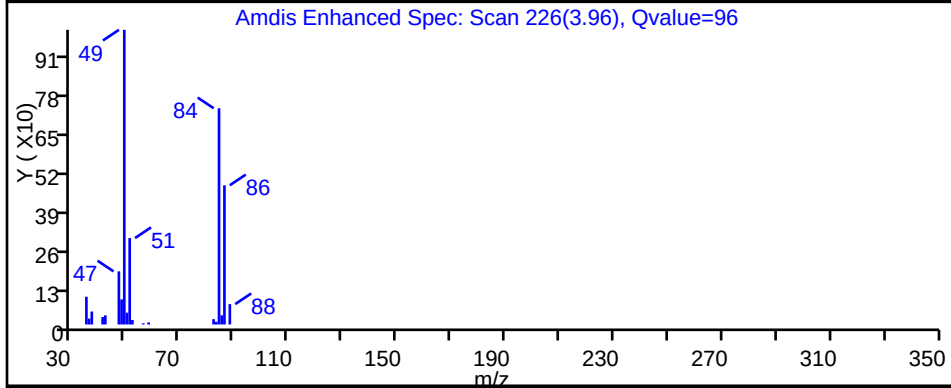
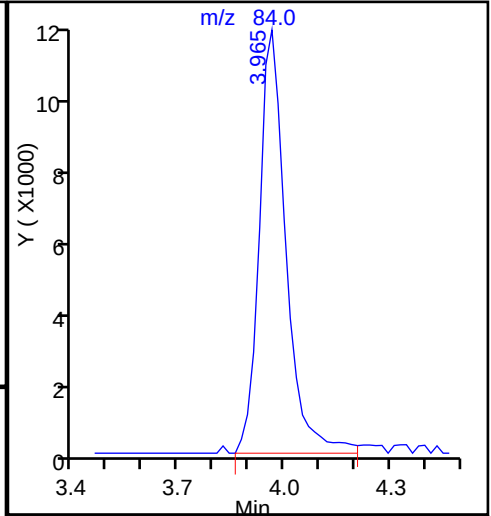
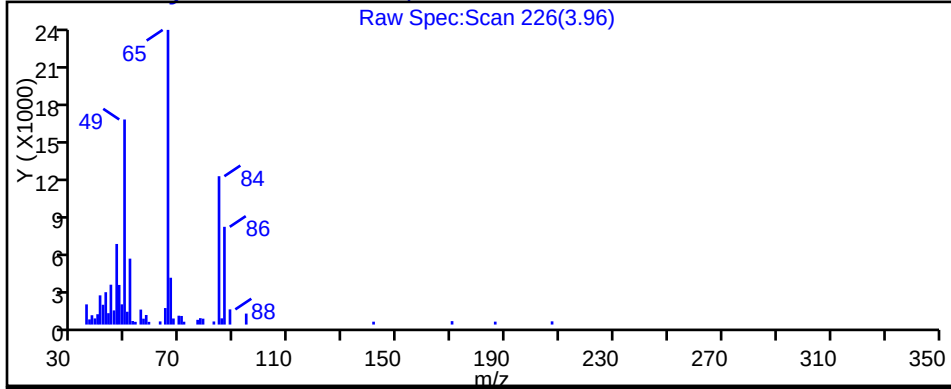
Dil. Factor: 1.0000

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Detector: MS SCAN

54 Methylene Chloride, CAS: 75-09-2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: MB 280-350742/6

Matrix: Water Lab File ID: P3848.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 11/10/2016 09:29

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (60.25) ID: 0.25 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 350742 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.14
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.13
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	1.8
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	1.0
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: MB 280-350742/6
Matrix: Water Lab File ID: P3848.D
Analysis Method: 8260B Date Collected: _____
Sample wt/vol: 20 (mL) Date Analyzed: 11/10/2016 09:29
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 (60.25) ID: 0.25 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 350742 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	109		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3848.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 10-Nov-2016 09:29:30 ALS Bottle#: 14 Worklist Smp#: 6
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:22 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:20:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.657	5.643	0.014	87	170269	250.0	250.0	
* 1 Fluorobenzene	96	7.623	7.616	0.007	98	1901941	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	90	396536	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.713	11.713	0.000	97	577818	12.5	12.5	
* 149 1,4-Dioxane-d8	96		0.000					ND	
\$ 5 Dibromofluoromethane (Surr	111	7.080	7.073	0.007	92	497214	11.5	11.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.373	7.366	0.007	99	465547	11.5	11.8	
\$ 7 Toluene-d8 (Surr)	98	8.810	8.803	0.007	96	2054508	11.5	12.6	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	87	566617	11.5	11.2	
\$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
\$ 4 BFB	95		4.970					ND	
23 Dichlorodifluoromethane	85		3.888					ND	
22 Chlorotrifluoroethene	116		3.901					ND	
26 Chloromethane	50		4.112					ND	
24 1,2-Dichloro-1,1,2,2-tetra	85		4.125					ND	
27 Vinyl chloride	62		4.251					ND	
25 2-Chloro-1,1,1-Trifluoroet	118		4.404					ND	
28 Ethylene oxide	43		4.574					ND	
29 Bromomethane	94		4.628					ND	
30 Chloroethane	64		4.684					ND	
31 Dichlorofluoromethane	67		4.852					ND	
32 Trichlorofluoromethane	101		4.963					ND	
33 Ethanol	45		4.979					ND	
35 Ethyl ether	59		5.103					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.200					ND	
38 Propene oxide	58		5.217					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.242					ND	
39 Acrolein	56		5.271					ND	
40 1,1,2-Trichloro-1,2,2-trif	151		5.368					ND	
41 Acetone	43		5.368					ND	
42 Isopropyl alcohol	45		5.384					ND	
43 1,1-Dichloroethene	96		5.410					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
44 Iodomethane	142		5.593					ND	
45 Methyl acetate	43		5.607					ND	
46 Acetonitrile	41		5.621					ND	
47 3-Chloro-1-propene	41		5.657					ND	
48 Carbon disulfide	76		5.700					ND	
49 2-Methyl-2-propanol	59		5.714					ND	
50 Methylene Chloride	84	5.764	5.764	0.000	95	52180		0.2912	
51 Methyl tert-butyl ether	73		5.921					ND	
52 Acrylonitrile	53		5.929					ND	
53 trans-1,2-Dichloroethene	96		5.972					ND	
54 Hexane	57		6.129					ND	
55 Vinyl acetate	43		6.236					ND	
56 Isopropyl ether	87		6.236					ND	
57 1,1-Dichloroethane	63		6.300					ND	
58 2-Chloro-1,3-butadiene	53		6.358					ND	
59 Tert-butyl ethyl ether	59		6.515					ND	
60 Ethyl acetate	43		6.672					ND	
61 2-Butanone (MEK)	43		6.687					ND	
62 sec-Butyl Alcohol	45		6.737					ND	
63 cis-1,2-Dichloroethene	96		6.737					ND	
64 2,2-Dichloropropane	77		6.758					ND	
65 Propionitrile	54		6.758					ND	
66 Methacrylonitrile	41		6.873					ND	
67 Chlorobromomethane	128		6.937					ND	
68 Chloroform	83		6.944					ND	
69 Tetrahydrofuran	42		6.973					ND	
70 Isobutyl alcohol	41		7.158					ND	
71 1,1,1-Trichloroethane	97		7.158					ND	
72 Cyclohexane	56		7.223					ND	
73 1,1-Dichloropropene	75		7.259					ND	
74 Carbon tetrachloride	117		7.287					ND	
75 Tert-amyl methyl ether	73		7.423					ND	
76 1,2-Dichloroethane	62		7.430					ND	
77 Benzene	78		7.444					ND	
14 n-Heptane	43		7.502					ND	
78 n-Butanol	56		7.659					ND	
79 Trichloroethene	95		7.909					ND	
80 2-Pentanone	43		7.959					ND	
81 Methyl methacrylate	100		8.045					ND	
82 Methylcyclohexane	55		8.088					ND	
83 1,2-Dichloropropane	63		8.102					ND	
84 1,4-Dioxane	88		8.159					ND	
85 Dibromomethane	93		8.202					ND	
86 Dichlorobromomethane	83		8.274					ND	
87 2-Chloroethyl vinyl ether	63		8.417					ND	
88 2-Nitropropane	41		8.424					ND	
89 cis-1,3-Dichloropropene	75		8.588					ND	
90 4-Methyl-2-pentanone (MIBK)	43		8.646					ND	
91 Toluene	91		8.860					ND	
92 Ethyl methacrylate	69		8.946					ND	
93 trans-1,3-Dichloropropene	75		8.967					ND	
94 1,1,2-Trichloroethane	97		9.125					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 2-Hexanone	43		9.239					ND	
96 1,3-Dichloropropane	76		9.261					ND	
97 Tetrachloroethene	164		9.268					ND	
98 Chlorodibromomethane	129		9.454					ND	
99 Tetrahydrothiophene	60		9.497					ND	
100 Ethylene Dibromide	107		9.582					ND	
101 1-Chlorohexane	91		9.790					ND	
102 Chlorobenzene	112		9.911					ND	
103 Ethylbenzene	106		9.940					ND	
104 1,1,1,2-Tetrachloroethane	131		9.947					ND	
105 m-Xylene & p-Xylene	106		10.018					ND	
107 o-Xylene	106		10.333					ND	
106 Styrene	104		10.340					ND	
108 Bromoform	173		10.548					ND	
109 Isopropylbenzene	105		10.590					ND	
110 cis-1,4-Dichloro-2-butene	53		10.626					ND	
111 Cyclohexanone	55		10.741					ND	
112 1,1,2,2-Tetrachloroethane	83		10.805					ND	
113 trans-1,4-Dichloro-2-buten	53		10.841					ND	
114 1,2,3-Trichloropropane	110		10.884					ND	
115 N-Propylbenzene	120		10.912					ND	
116 Bromobenzene	156		10.919					ND	
117 1,3,5-Trimethylbenzene	105		11.020					ND	
118 2-Chlorotoluene	126		11.034					ND	
119 4-Chlorotoluene	126		11.112					ND	
120 tert-Butylbenzene	119		11.320					ND	
121 1,2,4-Trimethylbenzene	105		11.348					ND	
122 sec-Butylbenzene	134		11.499					ND	
123 4-Isopropyltoluene	119		11.584					ND	
124 1,3-Dichlorobenzene	146		11.663					ND	
125 1,2,3-Trimethylbenzene	105		11.728					ND	
126 1,4-Dichlorobenzene	146		11.735					ND	
127 n-Butylbenzene	91		11.956					ND	
128 1,2-Dichlorobenzene	146		12.099					ND	
129 1,2-Dibromo-3-Chloropropan	157		12.857					ND	
16 1,3,5-Trichlorobenzene	180		13.050					ND	
130 1,2,4-Trichlorobenzene	180		13.801					ND	
131 Hexachlorobutadiene	225		13.937					ND	
132 Naphthalene	128		14.180					ND	
133 1,2,3-Trichlorobenzene	180		14.502					ND	
17 3-Ethylpentane	1		0.000					ND	
10 n-Nonyl Aldehyde	1		0.000					ND	
34 Propene oxide TIC	58		0.000					ND	
11 2,3-Dimethylpentane	1		0.000					ND	
12 2,2,3-Trimethylbutane	1		0.000					ND	
20 2-Methylhexane	1		0.000					ND	
143 Pentachloroethane	167		0.000					ND	
13 2,2-Dimethylpentane	1		0.000					ND	
15 Dimethyl disulfide	1		0.000					ND	
9 2,4-Dimethylpentane	1		0.000					ND	
19 3-Methylhexane	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 140 1,2-Dichloroethene, Total	96		2.000					ND	
S 138 1,2-Dichloroethene, Total	1		0.000					ND	
S 139 Xylenes, Total	106		0.000					ND	
S 152 TAH	1				0			0	
S 137 1,3-Dichloropropene, Total	1		0.000					ND	
S 134 Trihalomethanes, Total	1		0.000					ND	
S 135 Xylenes, Total (URS)	1		0.000					ND	
S 136 Total BTEX	1		0.000					ND	
T 156 1,3-Butadiene TIC	1		0.000					ND	
T 155 4-Ethyltoluene TIC	1		0.000					ND	
T 157 n-Nonane TIC	1		0.000					ND	
T 153 Propene TIC	1		0.000					ND	
T 141 Dichloroacetonitrile TIC	74		0.000					ND	
T 21 2-Butoxyethanol TIC	1		0.000					ND	
T 154 Dicyclopentadiene TIC	1		0.000					ND	
T 142 2,3-dichloro-1-propene TIC	75		0.000					ND	

Reagents:

MV-567649-D_00001

Amount Added: 1.00

Units: uL

Run Reagent

MV-ARCH SS A_00074

Amount Added: 0.92

Units: uL

Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3848.D

Injection Date: 10-Nov-2016 09:29:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: MB

Worklist Smp#: 6

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

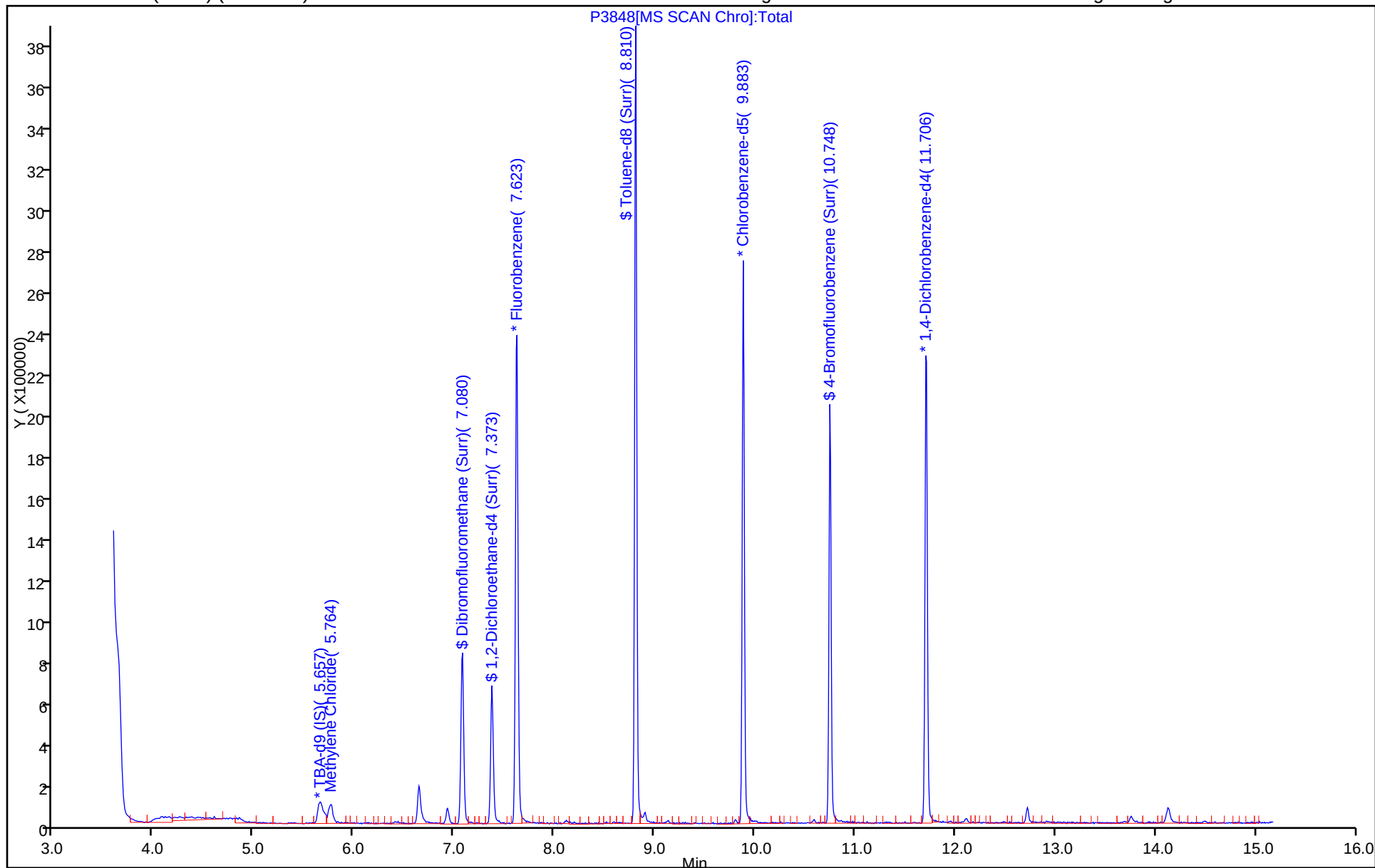
ALS Bottle#: 14

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3848.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 10-Nov-2016 09:29:30 ALS Bottle#: 14 Worklist Smp#: 6
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:22 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:20:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	11.5	11.5	99.94
\$ 6 1,2-Dichloroethane-d4 (Surr)	11.5	11.8	102.33
\$ 7 Toluene-d8 (Surr)	11.5	12.6	109.14
\$ 8 4-Bromofluorobenzene (Surr)	11.5	11.2	97.05

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 280-350526/4

Matrix: Water Lab File ID: H1444.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 11/09/2016 07:52

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 350526 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	5.28		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	3.91		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	4.94		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	4.55		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	5.03		1.0	0.80	0.14
106-93-4	1,2-Dibromoethane	4.82		1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	5.13		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	10.3		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	4.45		1.0	0.40	0.13
78-93-3	2-Butanone (MEK)	17.6		6.0	4.0	1.8
591-78-6	2-Hexanone	18.0		5.0	4.0	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	20.8		5.0	3.2	1.0
67-64-1	Acetone	18.7		10	6.4	1.9
71-43-2	Benzene	4.95		1.0	0.40	0.16
74-97-5	Bromochloromethane	5.39		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.84		1.0	0.40	0.17
75-25-2	Bromoform	5.14		1.0	0.40	0.19
74-83-9	Bromomethane	6.09		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.00		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.58		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.86		1.0	0.40	0.17
75-00-3	Chloroethane	5.13		2.0	1.6	0.41
67-66-3	Chloroform	4.96		1.0	0.40	0.16
74-87-3	Chloromethane	5.15		2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	4.55		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.73		1.0	0.40	0.17
100-41-4	Ethylbenzene	4.84		1.0	0.40	0.16
75-09-2	Methylene Chloride	5.79		5.0	0.80	0.32
100-42-5	Styrene	4.79		1.0	0.40	0.17
127-18-4	Tetrachloroethene	5.43		1.0	0.40	0.20
108-88-3	Toluene	5.14		1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	5.03		1.0	0.40	0.19
79-01-6	Trichloroethene	5.01		1.0	0.40	0.16
75-01-4	Vinyl chloride	5.71		1.5	0.20	0.10
1330-20-7	Xylenes, Total	9.77		2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: LCS 280-350526/4
Matrix: Water Lab File ID: H1444.D
Analysis Method: 8260B Date Collected: _____
Sample wt/vol: 20 (mL) Date Analyzed: 11/09/2016 07:52
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 (75.53) ID: 0.53 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 350526 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
460-00-4	4-Bromofluorobenzene (Surr)	91		85-114
1868-53-7	Dibromofluoromethane (Surr)	105		80-119
2037-26-5	Toluene-d8 (Surr)	94		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1444.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 09-Nov-2016 07:52:30 ALS Bottle#: 3 Worklist Smp#: 4
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: lcs
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:41 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 11:39:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 TBA-d9 (IS)	65	3.984	3.979	0.005	96	244924	250.0	250.0	
* 2 Fluorobenzene	96	6.753	6.748	0.005	98	1283943	12.5	12.5	
* 4 Chlorobenzene-d5	119	11.090	11.084	0.006	86	329530	12.5	12.5	
* 5 1,4-Dichlorobenzene-d4	152	14.086	14.097	-0.011	95	576172	12.5	12.5	
\$ 8 Dibromofluoromethane (Surr	111	5.917	5.929	-0.012	94	617273	9.75	10.3	
\$ 9 1,2-Dichloroethane-d4 (Sur	65	6.335	6.347	-0.012	96	239563	9.75	9.74	
\$ 10 Toluene-d8 (Surr)	98	8.861	8.855	0.006	93	1357622	9.75	9.17	
\$ 11 4-Bromofluorobenzene (Surr	95	12.744	12.756	-0.012	91	696586	9.75	8.86	
28 Dichlorodifluoromethane	85	2.156	2.152	0.004	99	242086	5.00	5.95	
30 Chloromethane	50	2.260	2.256	0.004	98	159541	5.00	5.15	
32 Vinyl chloride	62	2.399	2.396	0.003	98	179648	5.00	5.71	
35 Bromomethane	94	2.678	2.674	0.004	90	170748	5.00	6.09	
36 Chloroethane	64	2.765	2.761	0.004	99	111309	5.00	5.13	
37 Dichlorofluoromethane	67	2.939	2.935	0.004	98	396519	5.00	5.16	
38 Trichlorofluoromethane	101	2.992	2.988	0.004	100	353517	5.00	6.72	
40 Ethyl ether	59	3.235	3.214	0.021	93	80808	5.00	4.44	
44 Acrolein	56	3.375	3.371	0.004	98	135758	50.0	49.5	
45 1,1-Dichloroethene	96	3.479	3.475	0.004	98	166089	5.00	5.03	
46 1,1,2-Trichloro-1,2,2-trif	151	3.497	3.493	0.004	97	225728	5.00	5.44	
47 Acetone	43	3.531	3.510	0.021	100	48404	20.0	18.7	
48 Iodomethane	142	3.653	3.649	0.004	98	394847	5.00	5.23	
50 Carbon disulfide	76	3.740	3.719	0.021	99	586265	5.00	5.00	
53 Methyl acetate	43	3.828	3.824	0.004	96	205319	25.0	20.5	
52 3-Chloro-1-propene	41	3.828	3.824	0.004	90	269707	5.00	4.58	
54 Methylene Chloride	84	3.967	3.946	0.021	95	204808	5.00	5.79	
55 2-Methyl-2-propanol	59	4.071	4.067	0.004	95	53765	50.0	44.1	
57 Acrylonitrile	53	4.211	4.207	0.004	99	123341	50.0	43.1	
56 Methyl tert-butyl ether	73	4.246	4.242	0.004	89	268915	5.00	4.81	
58 trans-1,2-Dichloroethene	96	4.246	4.242	0.004	100	196929	5.00	5.30	
59 Hexane	57	4.507	4.503	0.004	91	271625	5.00	4.50	
60 1,1-Dichloroethane	63	4.698	4.694	0.004	96	318937	5.00	4.55	
61 Vinyl acetate	43	4.716	4.712	0.004	97	653363	10.0	9.07	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
67 2-Butanone (MEK)	43	5.360	5.356	0.004	46	87222	20.0	17.6	
65 cis-1,2-Dichloroethene	96	5.360	5.356	0.004	83	192458	5.00	4.95	
66 2,2-Dichloropropane	77	5.378	5.374	0.004	90	314553	5.00	5.52	
71 sec-Butyl Alcohol	45	5.587	5.583	0.004	97	125441	150.0	115.7	
73 Chlorobromomethane	128	5.656	5.652	0.004	96	96976	5.00	5.39	
74 Tetrahydrofuran	42	5.708	5.705	0.003	67	28188	10.0	7.63	
75 Chloroform	83	5.726	5.722	0.004	94	321980	5.00	4.96	
76 1,1,1-Trichloroethane	97	5.970	5.966	0.004	98	293161	5.00	5.28	
77 Cyclohexane	56	6.039	6.035	0.004	89	300372	5.00	4.84	
78 1,1-Dichloropropene	75	6.161	6.157	0.004	98	281228	5.00	5.13	
79 Carbon tetrachloride	117	6.179	6.175	0.004	97	292534	5.00	5.58	
80 Isobutyl alcohol	41	6.301	6.279	0.022	93	39434	125.0	107.3	
81 Benzene	78	6.422	6.419	0.003	96	543944	5.00	4.95	
82 1,2-Dichloroethane	62	6.440	6.436	0.004	95	125886	5.00	5.13	
84 n-Heptane	43	6.719	6.715	0.004	92	328676	5.00	5.00	
86 Trichloroethene	95	7.224	7.220	0.004	97	235738	5.00	5.01	
88 2-Pentanone	43	7.467	7.446	0.021	98	260627	20.0	11.9	
89 Methylcyclohexane	55	7.485	7.481	0.004	91	273378	5.00	5.15	
90 1,2-Dichloropropane	63	7.520	7.516	0.004	95	188692	5.00	4.45	
92 Dibromomethane	93	7.694	7.690	0.004	95	113262	5.00	5.13	
93 1,4-Dioxane	88	7.729	7.707	0.022	29	10312	100.0	87.4	
94 Dichlorobromomethane	83	7.885	7.882	0.003	99	275478	5.00	4.84	
96 2-Chloroethyl vinyl ether	63	8.286	8.282	0.004	92	64509	5.00	4.11	
97 cis-1,3-Dichloropropene	75	8.495	8.491	0.004	97	259633	5.00	4.55	
98 4-Methyl-2-pentanone (MIBK)	43	8.704	8.700	0.004	95	327572	20.0	20.8	
99 Toluene	91	8.965	8.961	0.004	99	634166	5.00	5.14	
100 trans-1,3-Dichloropropene	75	9.279	9.257	0.022	93	183656	5.00	5.03	
101 Ethyl methacrylate	69	9.401	9.397	0.004	87	142116	5.00	4.26	
102 1,1,2-Trichloroethane	97	9.540	9.536	0.004	90	126668	5.00	4.94	
103 Tetrachloroethene	164	9.749	9.745	0.004	97	257122	5.00	5.43	
104 1,3-Dichloropropane	76	9.784	9.780	0.004	89	193993	5.00	4.47	
105 2-Hexanone	43	9.906	9.902	0.004	95	207448	20.0	18.0	
108 Chlorodibromomethane	129	10.132	10.128	0.004	90	225691	5.00	4.73	
109 Ethylene Dibromide	107	10.324	10.320	0.004	99	164962	5.00	4.82	
110 1-Chlorohexane	91	11.090	11.086	0.004	94	327309	5.00	4.68	
111 Chlorobenzene	112	11.142	11.138	0.004	96	471832	5.00	4.86	
112 1,1,1,2-Tetrachloroethane	131	11.264	11.260	0.004	96	226205	5.00	4.84	
113 Ethylbenzene	106	11.299	11.295	0.004	98	228293	5.00	4.84	
114 m-Xylene & p-Xylene	106	11.491	11.487	0.004	99	321002	5.00	4.97	
115 o-Xylene	106	12.065	12.061	0.004	96	280301	5.00	4.80	
116 Styrene	104	12.083	12.079	0.004	94	446745	5.00	4.79	
117 Bromoform	173	12.344	12.340	0.004	98	140045	5.00	5.14	
118 Isopropylbenzene	105	12.553	12.549	0.004	95	854290	5.00	4.47	
120 Cyclohexanone	55	12.692	12.688	0.004	88	82300	200.0	178.5	
122 Bromobenzene	156	12.936	12.932	0.004	94	238167	5.00	4.77	
121 1,1,2,2-Tetrachloroethane	83	12.936	12.932	0.004	94	162999	5.00	3.91	
123 1,2,3-Trichloropropane	110	12.988	12.984	0.004	83	38654	5.00	4.14	
124 trans-1,4-Dichloro-2-buten	53	13.006	13.002	0.004	72	31819	5.00	4.02	
125 N-Propylbenzene	120	13.075	13.071	0.004	98	221199	5.00	4.71	
126 2-Chlorotoluene	126	13.162	13.159	0.003	97	183422	5.00	4.65	
127 1,3,5-Trimethylbenzene	105	13.284	13.280	0.004	96	634138	5.00	4.66	
128 4-Chlorotoluene	126	13.302	13.298	0.004	98	215697	5.00	4.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
129 tert-Butylbenzene	119	13.650	13.646	0.004	94	732721	5.00	4.65	
130 1,2,4-Trimethylbenzene	105	13.702	13.716	-0.014	96	608514	5.00	4.61	
131 sec-Butylbenzene	134	13.894	13.890	0.004	93	197895	5.00	4.80	
132 1,3-Dichlorobenzene	146	14.016	14.012	0.004	96	340608	5.00	4.54	
133 4-Isopropyltoluene	119	14.051	14.064	-0.013	98	840548	5.00	4.86	
134 1,4-Dichlorobenzene	146	14.120	14.116	0.004	96	500394	5.00	4.89	
137 n-Butylbenzene	91	14.486	14.482	0.004	97	742769	5.00	4.62	
138 1,2-Dichlorobenzene	146	14.503	14.500	0.003	98	353517	5.00	4.75	
139 1,2-Dibromo-3-Chloropropan	157	15.287	15.283	0.004	93	34531	5.00	4.42	
141 1,2,4-Trichlorobenzene	180	16.054	16.050	0.004	94	269041	5.00	5.03	
142 Hexachlorobutadiene	225	16.210	16.206	0.004	96	262052	5.00	5.39	
143 Naphthalene	128	16.280	16.276	0.004	96	245962	5.00	4.44	
144 1,2,3-Trichlorobenzene	180	16.506	16.502	0.004	95	198324	5.00	4.83	
S 151 1,2-Dichloroethene, Total	96				0		10.0	10.2	
S 149 1,2-Dichloroethene, Total	1				0		5.00	10.2	
S 150 Xylenes, Total	106				0		10.0	9.76	
S 148 1,3-Dichloropropene, Total	1				0		10.0	9.58	
S 145 Trihalomethanes, Total	1				0		20.0	19.7	
S 146 Xylenes, Total (URS)	1				0		10.0	9.76	

Reagents:

MV-Main B_00016	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00030	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00030	Amount Added: 2.50	Units: uL	
MV-568718-D_00006	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.78	Units: uL	Run Reagent

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1444.D

Injection Date: 09-Nov-2016 07:52:30

Instrument ID: VMS_H

Operator ID: moanm

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

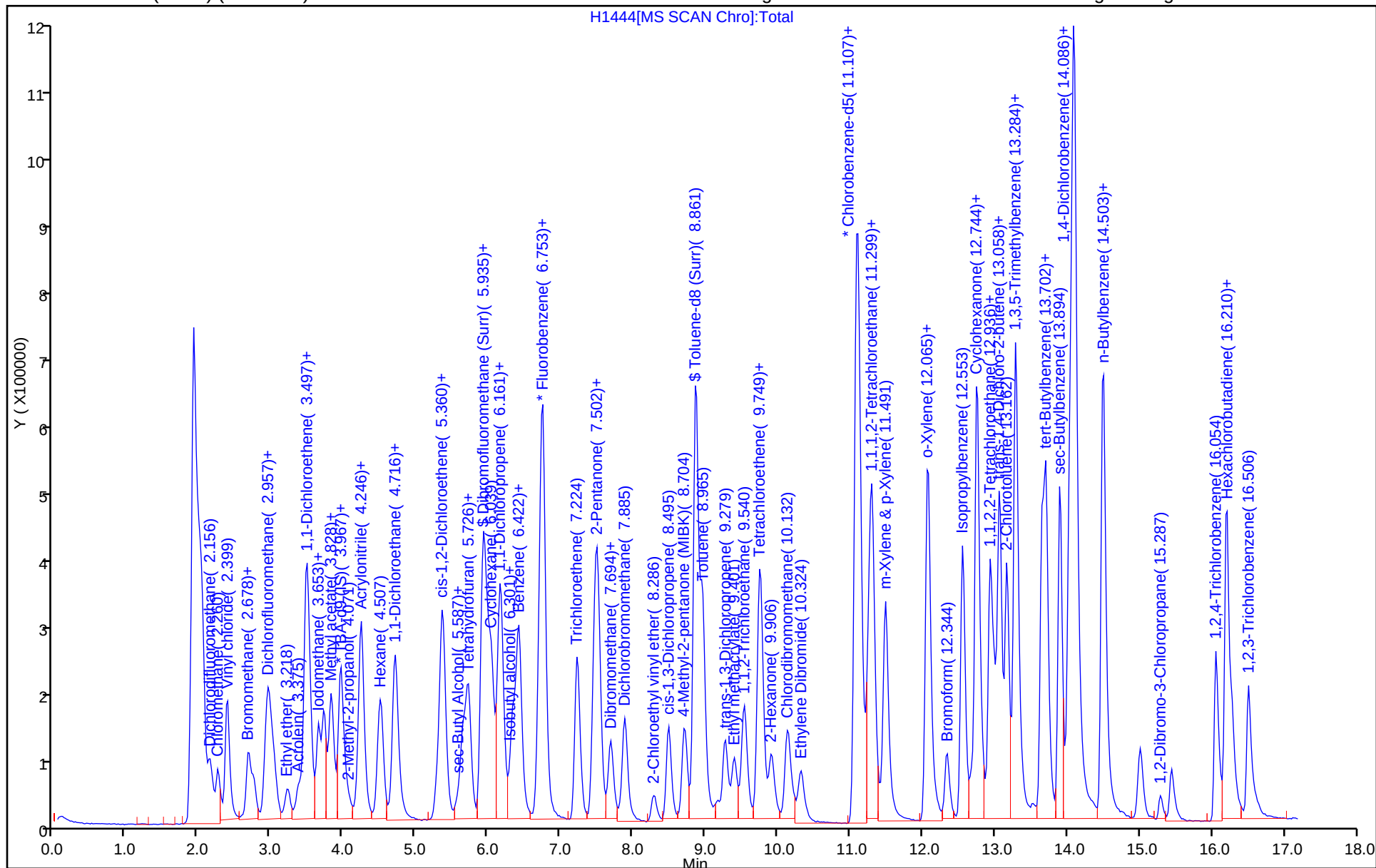
ALS Bottle#: 3

Method: AQ_VMSH_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (75.53) (0.53 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\H1444.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 09-Nov-2016 07:52:30 ALS Bottle#: 3 Worklist Smp#: 4
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: lcs
 Operator ID: moanm Instrument ID: VMS_H
 Method: \\ChromNA\Denver\ChromData\VMS_H\20161109-52876.b\AQ_VMSH_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 09-Nov-2016 15:18:41 Calib Date: 02-Nov-2016 13:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_H\20161102-52585.b\H1090.D
 Column 1 : DB-624 (75.53) (0.53 mm) Det: MS SCAN
 Process Host: XAWRK010

First Level Reviewer: moanm

Date: 09-Nov-2016 11:39:54

Compound	Amount Added	Amount Recovered	% Rec.
\$ 8 Dibromofluoromethane (Surr)	9.75	10.3	105.20
\$ 9 1,2-Dichloroethane-d4 (Surr)	9.75	9.74	99.87
\$ 10 Toluene-d8 (Surr)	9.75	9.17	94.03
\$ 11 4-Bromofluorobenzene (Surr)	9.75	8.86	90.91

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Client Sample ID: _____ Lab Sample ID: LCS 280-350742/4

Matrix: Water Lab File ID: P3849.D

Analysis Method: 8260B Date Collected: _____

Sample wt/vol: 20 (mL) Date Analyzed: 11/10/2016 09:48

Soil Aliquot Vol: _____ Dilution Factor: 1

Soil Extract Vol.: _____ GC Column: DB-624 (60.25) ID: 0.25 (mm)

% Moisture: _____ Level: (low/med) Low

Analysis Batch No.: 350742 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	5.14		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	4.92		1.0	0.80	0.20
79-00-5	1,1,2-Trichloroethane	5.62		1.0	0.80	0.32
75-34-3	1,1-Dichloroethane	5.23		1.0	0.80	0.16
75-35-4	1,1-Dichloroethene	5.58		1.0	0.80	0.14
106-93-4	1,2-Dibromoethane	5.23		1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	5.03		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	11.0		1.0	0.20	0.15
78-87-5	1,2-Dichloropropane	5.50		1.0	0.40	0.13
78-93-3	2-Butanone (MEK)	18.5		6.0	4.0	1.8
591-78-6	2-Hexanone	16.0		5.0	4.0	1.4
108-10-1	4-Methyl-2-pentanone (MIBK)	17.8		5.0	3.2	1.0
67-64-1	Acetone	18.4		10	6.4	1.9
71-43-2	Benzene	5.49		1.0	0.40	0.16
74-97-5	Bromochloromethane	5.73		1.0	0.20	0.10
75-27-4	Bromodichloromethane	5.26		1.0	0.40	0.17
75-25-2	Bromoform	5.16		1.0	0.40	0.19
74-83-9	Bromomethane	5.57		2.0	0.80	0.21
75-15-0	Carbon disulfide	5.82		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	5.42		2.0	0.40	0.19
108-90-7	Chlorobenzene	5.24		1.0	0.40	0.17
75-00-3	Chloroethane	4.64		2.0	1.6	0.41
67-66-3	Chloroform	5.25		1.0	0.40	0.16
74-87-3	Chloromethane	4.17		2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	4.34		1.0	0.40	0.16
124-48-1	Dibromochloromethane	4.62		1.0	0.40	0.17
100-41-4	Ethylbenzene	5.40		1.0	0.40	0.16
75-09-2	Methylene Chloride	6.20		5.0	0.80	0.32
100-42-5	Styrene	5.22		1.0	0.40	0.17
127-18-4	Tetrachloroethene	5.27		1.0	0.40	0.20
108-88-3	Toluene	5.71		1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	5.11		1.0	0.40	0.19
79-01-6	Trichloroethene	5.02		1.0	0.40	0.16
75-01-4	Vinyl chloride	4.82		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.8		2.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG No.: _____
Client Sample ID: _____ Lab Sample ID: LCS 280-350742/4
Matrix: Water Lab File ID: P3849.D
Analysis Method: 8260B Date Collected: _____
Sample wt/vol: 20 (mL) Date Analyzed: 11/10/2016 09:48
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: DB-624 (60.25) ID: 0.25 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 350742 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		81-118
460-00-4	4-Bromofluorobenzene (Surr)	85		85-114
1868-53-7	Dibromofluoromethane (Surr)	88		80-119
2037-26-5	Toluene-d8 (Surr)	98		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3849.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 10-Nov-2016 09:48:30 ALS Bottle#: 15 Worklist Smp#: 4
 Purge Vol: 20.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Operator ID: SEIFERTJ Instrument ID: VMS_P
 Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
 Limit Group: MSV - 8260B Water and Solid
 Last Update: 11-Nov-2016 09:54:22 Calib Date: 07-Nov-2016 12:50:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
 Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
 Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:19:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	5.650	5.643	0.007	48	209864	250.0	250.0	M
* 1 Fluorobenzene	96	7.624	7.616	0.008	98	2183514	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.883	9.883	0.000	89	482580	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.706	11.713	-0.007	97	843142	12.5	12.5	
\$ 5 Dibromofluoromethane (Surr	111	7.080	7.073	0.007	91	501011	11.5	10.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.373	7.366	0.007	99	468048	11.5	10.3	
\$ 7 Toluene-d8 (Surr)	98	8.810	8.803	0.007	95	2249876	11.5	11.3	
\$ 8 4-Bromofluorobenzene (Surr	95	10.748	10.748	0.000	86	719569	11.5	9.81	
23 Dichlorodifluoromethane	85	3.875	3.888	-0.013	100	444371	5.00	5.29	
26 Chloromethane	50	4.113	4.112	0.001	98	276379	5.00	4.17	
27 Vinyl chloride	62	4.252	4.251	0.001	99	295418	5.00	4.82	
29 Bromomethane	94	4.629	4.628	0.001	98	206695	5.00	5.57	
30 Chloroethane	64	4.685	4.684	0.001	95	170624	5.00	4.64	
31 Dichlorofluoromethane	67	4.853	4.852	0.001	99	669964	5.00	6.10	
32 Trichlorofluoromethane	101	4.965	4.963	0.002	98	583132	5.00	5.39	
35 Ethyl ether	59	5.118	5.103	0.015	92	146410	5.00	5.30	
39 Acrolein	56	5.272	5.271	0.001	98	274145	50.0	51.2	
40 1,1,2-Trichloro-1,2,2-trif	151	5.370	5.368	0.002	96	282178	5.00	5.62	
41 Acetone	43	5.384	5.368	0.016	33	126344	20.0	18.4	
43 1,1-Dichloroethene	96	5.411	5.410	0.001	95	340971	5.00	5.58	
44 Iodomethane	142	5.586	5.593	-0.007	99	439164	5.00	5.29	
45 Methyl acetate	43	5.607	5.607	0.000	97	351544	25.0	24.8	
47 3-Chloro-1-propene	41	5.664	5.657	0.007	85	491391	5.00	4.43	
48 Carbon disulfide	76	5.707	5.700	0.007	100	1223713	5.00	5.82	
49 2-Methyl-2-propanol	59	5.714	5.714	0.000	33	47989	50.0	39.7	
50 Methylene Chloride	84	5.772	5.764	0.008	98	351536	5.00	6.20	
51 Methyl tert-butyl ether	73	5.929	5.921	0.008	95	348166	5.00	4.71	
52 Acrylonitrile	53	5.929	5.929	0.000	75	299463	50.0	53.1	
53 trans-1,2-Dichloroethene	96	5.972	5.972	0.000	96	321102	5.00	5.50	
54 Hexane	57	6.129	6.129	0.000	96	541540	5.00	5.01	
55 Vinyl acetate	43	6.244	6.236	0.008	98	874037	10.0	9.60	
57 1,1-Dichloroethane	63	6.301	6.300	0.001	98	584452	5.00	5.23	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
61 2-Butanone (MEK)	43	6.694	6.687	0.007	98	168574	20.0	18.5	
62 sec-Butyl Alcohol	45	6.737	6.737	0.000	41	115086	150.0	125.8	
63 cis-1,2-Dichloroethene	96	6.737	6.737	0.000	87	299088	5.00	5.47	
64 2,2-Dichloropropane	77	6.758	6.758	0.000	86	403420	5.00	5.27	
67 Chlorobromomethane	128	6.944	6.937	0.007	96	99801	5.00	5.73	
68 Chloroform	83	6.944	6.944	0.000	97	521168	5.00	5.25	
69 Tetrahydrofuran	42	6.973	6.973	0.000	91	45527	10.0	8.85	
70 Isobutyl alcohol	41	7.152	7.158	-0.006	96	40759	125.0	96.3	
71 1,1,1-Trichloroethane	97	7.159	7.158	0.001	97	444921	5.00	5.14	
72 Cyclohexane	56	7.223	7.223	0.000	94	609071	5.00	5.16	
73 1,1-Dichloropropene	75	7.259	7.259	0.000	95	475883	5.00	5.37	
74 Carbon tetrachloride	117	7.295	7.287	0.008	95	446361	5.00	5.42	
76 1,2-Dichloroethane	62	7.431	7.430	0.001	94	291490	5.00	5.03	
77 Benzene	78	7.445	7.444	0.001	98	1202769	5.00	5.49	
14 n-Heptane	43	7.502	7.502	0.000	95	604933	5.00	5.17	
79 Trichloroethene	95	7.910	7.909	0.001	96	303894	5.00	5.02	
80 2-Pentanone	43	7.960	7.959	0.001	98	314282	NC	NC	
82 Methylcyclohexane	55	8.088	8.088	0.000	95	497128	5.00	4.90	
83 1,2-Dichloropropane	63	8.103	8.102	0.001	89	271929	5.00	5.50	
84 1,4-Dioxane	88	8.153	8.159	-0.006	36	11549	100.0	82.9	
85 Dibromomethane	93	8.210	8.202	0.008	93	99485	5.00	5.51	
86 Dichlorobromomethane	83	8.274	8.274	0.000	98	293077	5.00	5.26	
87 2-Chloroethyl vinyl ether	63	8.417	8.417	0.000	92	58231	5.00	4.80	
89 cis-1,3-Dichloropropene	75	8.589	8.588	0.001	91	286134	5.00	4.34	
90 4-Methyl-2-pentanone (MIBK)	43	8.646	8.646	0.000	99	333756	20.0	17.8	
91 Toluene	91	8.861	8.860	0.001	97	1295495	5.00	5.71	
92 Ethyl methacrylate	69	8.946	8.946	0.000	92	106735	5.00	4.16	
93 trans-1,3-Dichloropropene	75	8.968	8.967	0.001	98	227382	5.00	5.11	
94 1,1,2-Trichloroethane	97	9.125	9.125	0.000	94	135501	5.00	5.62	
95 2-Hexanone	43	9.240	9.239	0.001	97	205587	20.0	16.0	
96 1,3-Dichloropropane	76	9.261	9.261	0.000	96	256709	5.00	5.34	
97 Tetrachloroethene	164	9.268	9.268	0.000	94	262976	5.00	5.27	
98 Chlorodibromomethane	129	9.447	9.454	-0.007	90	144601	5.00	4.62	
100 Ethylene Dibromide	107	9.576	9.582	-0.006	99	116099	5.00	5.23	
101 1-Chlorohexane	91	9.790	9.790	0.000	88	394293	5.00	5.04	
102 Chlorobenzene	112	9.904	9.911	-0.007	95	750525	5.00	5.24	
103 Ethylbenzene	106	9.940	9.940	0.000	97	475475	5.00	5.40	
104 1,1,1,2-Tetrachloroethane	131	9.940	9.947	-0.007	92	228410	5.00	5.57	
105 m-Xylene & p-Xylene	106	10.012	10.018	-0.006	99	569665	5.00	5.37	
107 o-Xylene	106	10.333	10.333	0.000	89	525218	5.00	5.41	
106 Styrene	104	10.333	10.340	-0.007	83	692541	5.00	5.22	
108 Bromoform	173	10.548	10.548	0.000	92	62456	5.00	5.16	
109 Isopropylbenzene	105	10.591	10.590	0.001	97	1473750	5.00	4.62	
111 Cyclohexanone	55	10.741	10.741	0.000	91	95424	200.0	164.5	
112 1,1,2,2-Tetrachloroethane	83	10.805	10.805	0.000	96	145794	5.00	4.92	
113 trans-1,4-Dichloro-2-buten	53	10.841	10.841	0.000	71	34082	5.00	3.99	
114 1,2,3-Trichloropropane	110	10.877	10.884	-0.007	87	40825	5.00	4.84	
115 N-Propylbenzene	120	10.905	10.912	-0.007	98	449492	5.00	5.13	
116 Bromobenzene	156	10.913	10.919	-0.006	98	297351	5.00	5.14	
117 1,3,5-Trimethylbenzene	105	11.013	11.020	-0.007	94	1246976	5.00	4.83	
118 2-Chlorotoluene	126	11.034	11.034	0.000	95	367568	5.00	5.20	
119 4-Chlorotoluene	126	11.113	11.112	0.001	99	358663	5.00	5.07	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
120 tert-Butylbenzene	119	11.313	11.320	-0.007	93	1270069	5.00	4.92	
121 1,2,4-Trimethylbenzene	105	11.342	11.348	-0.006	99	1303546	5.00	4.93	
122 sec-Butylbenzene	134	11.492	11.499	-0.007	95	367467	5.00	5.08	
123 4-Isopropyltoluene	119	11.585	11.584	0.001	97	1497480	5.00	5.06	
124 1,3-Dichlorobenzene	146	11.663	11.663	0.000	96	665893	5.00	5.12	
126 1,4-Dichlorobenzene	146	11.735	11.735	0.001	93	665136	5.00	5.11	
127 n-Butylbenzene	91	11.949	11.956	-0.007	98	1555988	5.00	4.91	
128 1,2-Dichlorobenzene	146	12.092	12.099	-0.007	96	533666	5.00	5.04	
129 1,2-Dibromo-3-Chloropropan	157	12.857	12.857	0.000	74	15061	5.00	4.04	
130 1,2,4-Trichlorobenzene	180	13.794	13.801	-0.007	94	290828	5.00	4.15	
131 Hexachlorobutadiene	225	13.937	13.937	0.000	96	279431	5.00	4.84	
132 Naphthalene	128	14.173	14.180	-0.007	97	338636	5.00	3.84	
133 1,2,3-Trichlorobenzene	180	14.495	14.502	-0.007	94	243525	5.00	4.62	
S 140 1,2-Dichloroethene, Total	96				0		10.0	11.0	
S 138 1,2-Dichloroethene, Total	1				0		5.00	11.0	
S 139 Xylenes, Total	106				0		10.0	10.8	
S 137 1,3-Dichloropropene, Total	1				0		10.0	9.45	
S 134 Trihalomethanes, Total	1				0		20.0	20.3	
S 135 Xylenes, Total (URS)	1				0		10.0	10.8	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Reagents:

MV-Main B_00016	Amount Added: 2.50	Units: uL	
MV-Gas/Ket B_00030	Amount Added: 2.50	Units: uL	
MV-SS 2-Cleve_00030	Amount Added: 2.50	Units: uL	
MV-567649-D_00001	Amount Added: 1.00	Units: uL	Run Reagent
MV-ARCH SS A_00074	Amount Added: 0.92	Units: uL	Run Reagent

Report Date: 11-Nov-2016 09:54:25

Chrom Revision: 2.2 01-Nov-2016 11:37:52

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3849.D

Injection Date: 10-Nov-2016 09:48:30

Instrument ID: VMS_P

Operator ID: SEIFERTJ

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Purge Vol: 20.000 mL

Dil. Factor: 1.0000

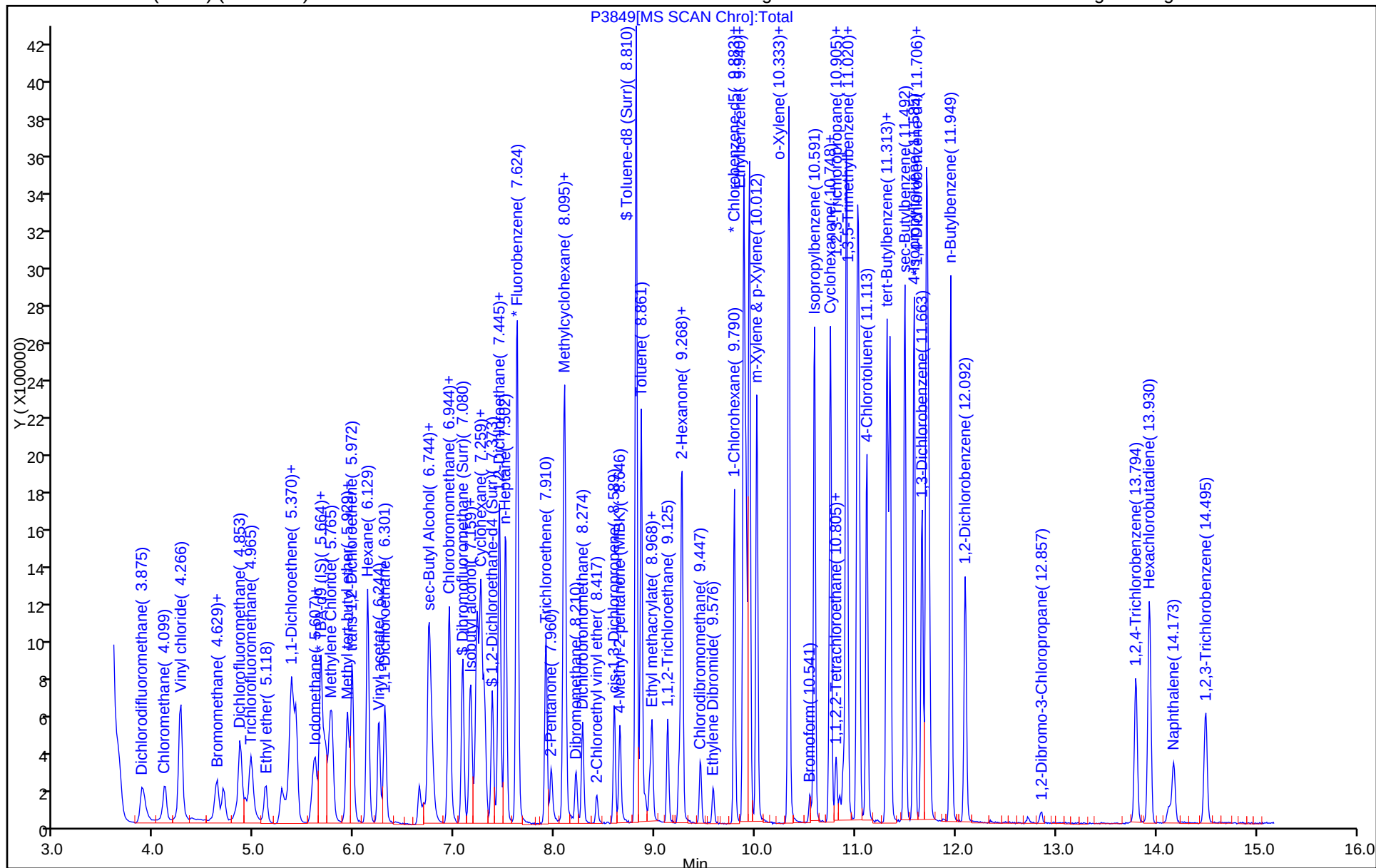
ALS Bottle#: 15

Method: AQ_VMSP_8260

Limit Group: MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3849.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Nov-2016 09:48:30 ALS Bottle#: 15 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: SEIFERTJ Instrument ID: VMS_P
Method: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\AQ_VMSP_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 11-Nov-2016 09:54:22 Calib Date: 07-Nov-2016 12:50:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_P\20161107-52785.b\P3704.D
Column 1 : DB-624 (60.25) (0.25 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: seifertj

Date: 11-Nov-2016 08:19:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	11.5	10.1	87.71
\$ 6 1,2-Dichloroethane-d4 (Surr)	11.5	10.3	89.62
\$ 7 Toluene-d8 (Surr)	11.5	11.3	98.21
\$ 8 4-Bromofluorobenzene (Surr)	11.5	9.81	85.31

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_P\20161110-52936.b\P3849.D

Injection Date: 10-Nov-2016 09:48:30

Instrument ID: VMS_P

Lims ID: LCS

Client ID:

Operator ID: SEIFERTJ

ALS Bottle#:

15

Worklist Smp#: 4

Purge Vol: 20.000 mL

Dil. Factor:

1.0000

Method: AQ_VMSP_8260

Limit Group:

MSV - 8260B Water and Solid

Column: DB-624 (60.25) (0.25 mm)

Detector

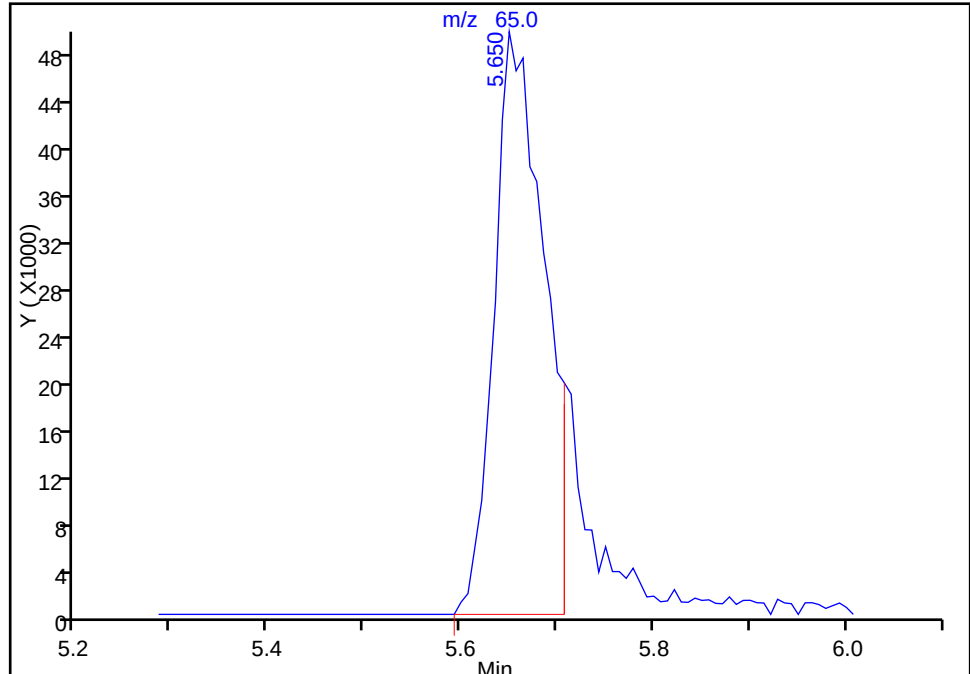
MS SCAN

* 150 TBA-d9 (IS), CAS: 25725-11-5

Signal: 1

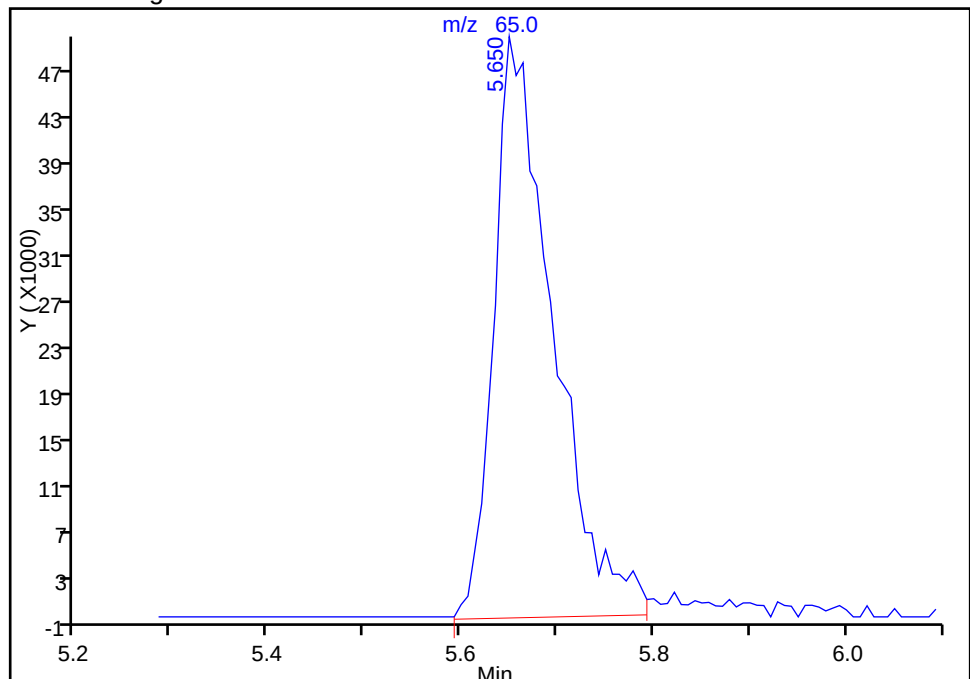
RT: 5.65
Area: 179135
Amount: 250.0000
Amount Units: ug/l

Processing Integration Results



RT: 5.65
Area: 209864
Amount: 250.0000
Amount Units: ug/l

Manual Integration Results



Reviewer: seifertj, 11-Nov-2016 08:19:33

Audit Action: Manually Integrated

Audit Reason: Split Peak

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_PStart Date: 09/13/2016 08:16Analysis Batch Number: 341836End Date: 09/13/2016 18:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-341836/1		09/13/2016 08:16	1	P1835.D	DB-624 (60.25) 0.25 (mm)
STD003 280-341836/12 IC		09/13/2016 08:44	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 08:44	1		DB-624 (60.25) 0.25 (mm)
STD010 280-341836/13 IC		09/13/2016 09:03	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 09:03	1		DB-624 (60.25) 0.25 (mm)
STD020 280-341836/14 IC		09/13/2016 09:23	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 09:23	1		DB-624 (60.25) 0.25 (mm)
STD050 280-341836/15 IC		09/13/2016 09:42	1		DB-624 (60.25) 0.25 (mm)
STD10 280-341836/16 IC		09/13/2016 10:02	1		DB-624 (60.25) 0.25 (mm)
STD30 280-341836/17 IC		09/13/2016 10:21	1		DB-624 (60.25) 0.25 (mm)
STD60 280-341836/18 IC		09/13/2016 10:41	1		DB-624 (60.25) 0.25 (mm)
ICV 280-341836/19		09/13/2016 11:20	1		DB-624 (60.25) 0.25 (mm)
STD010 280-341836/21 IC		09/13/2016 12:16	1	P1846.D	DB-624 (60.25) 0.25 (mm)
STD020 280-341836/22 IC		09/13/2016 12:35	1	P1847.D	DB-624 (60.25) 0.25 (mm)
STD050 280-341836/23 IC		09/13/2016 12:55	1	P1848.D	DB-624 (60.25) 0.25 (mm)
ICIS 280-341836/24		09/13/2016 13:14	1	P1849.D	DB-624 (60.25) 0.25 (mm)
STD30 280-341836/25 IC		09/13/2016 13:34	1	P1850.D	DB-624 (60.25) 0.25 (mm)
STD60 280-341836/26 IC		09/13/2016 13:53	1	P1851.D	DB-624 (60.25) 0.25 (mm)
ICV 280-341836/27		09/13/2016 14:32	1	P1853.D	DB-624 (60.25) 0.25 (mm)
ICV 280-341836/28		09/13/2016 14:51	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-1 MDLV		09/13/2016 15:11	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-2 MDLV		09/13/2016 15:30	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-3 MDLV		09/13/2016 15:50	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-4 MDLV		09/13/2016 16:09	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-5 MDLV		09/13/2016 16:29	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-7 MDLV		09/13/2016 16:48	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 16:48	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-8 MDLV		09/13/2016 17:08	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 17:08	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-9 MDLV		09/13/2016 17:27	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 17:27	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-10 MDLV		09/13/2016 17:46	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 17:46	1		DB-624 (60.25) 0.25 (mm)
280-87855-A-11 MDLV		09/13/2016 18:06	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		09/13/2016 18:06	1		DB-624 (60.25) 0.25 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_H Start Date: 10/07/2016 21:00Analysis Batch Number: 345574 End Date: 10/08/2016 04:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-345574/1		10/07/2016 21:00	1	H9955.D	DB-624 (75.53) 0.53 (mm)
IC 280-345574/16		10/07/2016 22:02	1		DB-624 (75.53) 0.53 (mm)
IC 280-345574/17		10/07/2016 22:25	1		DB-624 (75.53) 0.53 (mm)
IC 280-345574/18		10/07/2016 22:49	1		DB-624 (75.53) 0.53 (mm)
IC 280-345574/19		10/07/2016 23:12	1		DB-624 (75.53) 0.53 (mm)
IC 280-345574/20		10/07/2016 23:36	1		DB-624 (75.53) 0.53 (mm)
IC 280-345574/21		10/07/2016 23:59	1		DB-624 (75.53) 0.53 (mm)
IC 280-345574/22		10/08/2016 00:22	1		DB-624 (75.53) 0.53 (mm)
ICV 280-345574/23		10/08/2016 01:09	1		DB-624 (75.53) 0.53 (mm)
IC 280-345574/24		10/08/2016 01:33	1	H9967.D	DB-624 (75.53) 0.53 (mm)
IC 280-345574/25		10/08/2016 01:56	1	H9968.D	DB-624 (75.53) 0.53 (mm)
IC 280-345574/26		10/08/2016 02:19	1	H9969.D	DB-624 (75.53) 0.53 (mm)
ICIS 280-345574/27		10/08/2016 02:43	1	H9970.D	DB-624 (75.53) 0.53 (mm)
IC 280-345574/28		10/08/2016 03:06	1	H9971.D	DB-624 (75.53) 0.53 (mm)
IC 280-345574/29		10/08/2016 03:30	1	H9972.D	DB-624 (75.53) 0.53 (mm)
ICV 280-345574/30		10/08/2016 04:16	1	H9974.D	DB-624 (75.53) 0.53 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_PStart Date: 10/20/2016 08:31Analysis Batch Number: 347337End Date: 10/20/2016 20:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-347337/1		10/20/2016 08:31	1	P2898.D	DB-624 (60.25) 0.25 (mm)
CCV 280-347337/3		10/20/2016 09:01	1		DB-624 (60.25) 0.25 (mm)
STD003 280-347337/10 IC		10/20/2016 09:54	1	P2900.D	DB-624 (60.25) 0.25 (mm)
STD010 280-347337/11 IC		10/20/2016 10:14	1	P2901.D	DB-624 (60.25) 0.25 (mm)
STD020 280-347337/12 IC		10/20/2016 10:33	1	P2902.D	DB-624 (60.25) 0.25 (mm)
STD050 280-347337/13 IC		10/20/2016 10:53	1	P2903.D	DB-624 (60.25) 0.25 (mm)
ICIS 280-347337/14		10/20/2016 11:12	1	P2904.D	DB-624 (60.25) 0.25 (mm)
STD30 280-347337/15 IC		10/20/2016 11:32	1	P2905.D	DB-624 (60.25) 0.25 (mm)
STD60 280-347337/16 IC		10/20/2016 11:51	1	P2906.D	DB-624 (60.25) 0.25 (mm)
ICV 280-347337/17		10/20/2016 12:30	1	P2908.D	DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 13:06	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 13:25	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 14:05	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 14:24	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 14:44	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 15:03	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 15:23	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 15:43	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 16:02	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 16:22	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 16:42	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 17:01	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 17:21	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 17:40	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 18:00	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 18:20	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 18:39	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 18:59	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 19:18	1		DB-624 (60.25) 0.25 (mm)
CCVC 280-347337/38		10/20/2016 19:38	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 19:57	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 20:17	10		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 20:36	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		10/20/2016 20:56	1		DB-624 (60.25) 0.25 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_HStart Date: 11/02/2016 10:27Analysis Batch Number: 349323End Date: 11/02/2016 19:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-349323/1		11/02/2016 10:27	1	H1082.D	DB-624 (75.53) 0.53 (mm)
CCV 280-349323/3		11/02/2016 10:36	1		DB-624 (75.53) 0.53 (mm)
IC 280-349323/10		11/02/2016 10:59	1	H1084.D	DB-624 (75.53) 0.53 (mm)
IC 280-349323/11		11/02/2016 11:23	1	H1085.D	DB-624 (75.53) 0.53 (mm)
IC 280-349323/12		11/02/2016 11:47	1	H1086.D	DB-624 (75.53) 0.53 (mm)
IC 280-349323/13		11/02/2016 12:11	1	H1087.D	DB-624 (75.53) 0.53 (mm)
ICIS 280-349323/14		11/02/2016 12:35	1	H1088.D	DB-624 (75.53) 0.53 (mm)
IC 280-349323/15		11/02/2016 12:59	1	H1089.D	DB-624 (75.53) 0.53 (mm)
IC 280-349323/16		11/02/2016 13:22	1	H1090.D	DB-624 (75.53) 0.53 (mm)
ICV 280-349323/17		11/02/2016 15:24	1	H1095.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 15:48	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 16:12	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 16:36	200		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 17:00	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 17:24	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 17:48	4		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 18:13	4		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 18:37	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/02/2016 19:01	1		DB-624 (75.53) 0.53 (mm)
CCVC 280-349323/26		11/02/2016 19:25	1		DB-624 (75.53) 0.53 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_PStart Date: 11/07/2016 08:28Analysis Batch Number: 350126End Date: 11/07/2016 20:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-350126/1		11/07/2016 08:28	1	P3691.D	DB-624 (60.25) 0.25 (mm)
CCV 280-350126/2		11/07/2016 08:50	1		DB-624 (60.25) 0.25 (mm)
CCV 280-350126/3		11/07/2016 09:10	1		DB-624 (60.25) 0.25 (mm)
STD010 280-350126/10 IC		11/07/2016 11:12	1	P3699.D	DB-624 (60.25) 0.25 (mm)
STD020 280-350126/11 IC		11/07/2016 11:32	1	P3700.D	DB-624 (60.25) 0.25 (mm)
STD050 280-350126/12 IC		11/07/2016 11:51	1	P3701.D	DB-624 (60.25) 0.25 (mm)
STD10 280-350126/13 IC		11/07/2016 12:11	1	P3702.D	DB-624 (60.25) 0.25 (mm)
STD30 280-350126/14 IC		11/07/2016 12:30	1	P3703.D	DB-624 (60.25) 0.25 (mm)
STD60 280-350126/15 IC		11/07/2016 12:50	1	P3704.D	DB-624 (60.25) 0.25 (mm)
ICV 280-350126/16		11/07/2016 13:10	1	P3705.D	DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 13:29	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 13:49	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 14:08	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 14:28	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 14:48	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 15:08	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 15:27	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 15:47	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 16:07	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 16:27	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 16:46	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 17:06	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 17:26	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 17:45	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 18:05	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 18:24	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 18:44	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 19:04	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 19:23	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 19:43	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/07/2016 20:03	1		DB-624 (60.25) 0.25 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_HStart Date: 11/09/2016 06:52Analysis Batch Number: 350526End Date: 11/09/2016 18:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-350526/1		11/09/2016 06:52	1	H1441.D	DB-624 (75.53) 0.53 (mm)
CCV 280-350526/2		11/09/2016 07:04	1	H1442.D	DB-624 (75.53) 0.53 (mm)
CCV 280-350526/3		11/09/2016 07:28	1	H1443.D	DB-624 (75.53) 0.53 (mm)
LCS 280-350526/4		11/09/2016 07:52	1	H1444.D	DB-624 (75.53) 0.53 (mm)
MB 280-350526/6		11/09/2016 08:40	1	H1446.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 09:04	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 09:30	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 09:54	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 10:18	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 10:42	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 11:06	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 11:30	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 11:55	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 12:19	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 12:43	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 13:07	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 13:31	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 13:55	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 14:19	1		DB-624 (75.53) 0.53 (mm)
280-90232-1		11/09/2016 14:43	1	H1461.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 15:07	1		DB-624 (75.53) 0.53 (mm)
280-90232-3		11/09/2016 15:31	1	H1463.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 15:56	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 16:20	1		DB-624 (75.53) 0.53 (mm)
CCVC 280-350526/34		11/09/2016 16:44	1	H1466.D	DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 17:08	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 17:32	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 17:56	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 18:20	1		DB-624 (75.53) 0.53 (mm)
ZZZZZ		11/09/2016 18:44	1		DB-624 (75.53) 0.53 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica DenverJob No.: 280-90232-1

SDG No.: _____

Instrument ID: VMS_PStart Date: 11/10/2016 07:45Analysis Batch Number: 350742End Date: 11/10/2016 18:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-350742/1		11/10/2016 07:45	1	P3843.D	DB-624 (60.25) 0.25 (mm)
CCV 280-350742/2		11/10/2016 08:09	1	P3844.D	DB-624 (60.25) 0.25 (mm)
CCV 280-350742/3		11/10/2016 08:29	1	P3845.D	DB-624 (60.25) 0.25 (mm)
MB 280-350742/6		11/10/2016 09:29	1	P3848.D	DB-624 (60.25) 0.25 (mm)
LCS 280-350742/4		11/10/2016 09:48	1	P3849.D	DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 10:08	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 10:28	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 10:47	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 11:07	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 11:27	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 11:47	4		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 12:06	40		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 12:26	4		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 12:46	4		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 13:05	1		DB-624 (60.25) 0.25 (mm)
280-90232-2		11/10/2016 14:43	1	P3864.D	DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 15:03	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 15:23	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 15:42	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 16:02	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 16:22	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 16:41	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 17:01	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 17:20	1		DB-624 (60.25) 0.25 (mm)
CCVC 280-350742/37		11/10/2016 17:40	1	P3873.D	DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 18:00	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 18:19	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 18:39	1		DB-624 (60.25) 0.25 (mm)
ZZZZZ		11/10/2016 18:58	400		DB-624 (60.25) 0.25 (mm)

GCMS Volatile CCV & Batch Data Review Checklist

LIMS Batch Number: <u>350526</u>	Worklist #: <u>52876</u>	Instrument ID: <u>H</u>
Analyst/1 st Reviewer: <u>MM</u>	Analytical Method (circle):	
Date: <u>11-9-16</u>	624 <u>8260B</u> 8260 SIM Other _____	
QC Type (circle):	Standard	DOD Q4
	<u>DOD Q5</u>	QAPP
		Other _____
Matrix (circle one):	<u>Water</u>	Solid
	Circle: 5-mL	<u>20-mL</u> Meth Ext 5 g

Review Items	NA	Yes	No	2 nd Rev	Comments (List NCM #)
A. Tune & Continuing Calibration					
1. Did BFB meet tune criteria? If CFCs, did autotune meet SOP criteria?		<u>+</u>		<u>/</u>	Time of injection: <u>6:52</u>
2. Was the correct ICAL used for quantitation? Date and instrument ID of ICAL verified? (Check in both Chrom/Target and TALS)		<u>+</u>		<u>/</u>	
3. Is ICAL locked in TALS and Chrom?		<u>+</u>		<u>/</u>	
4. Do RFs meet minimum criteria? (624 – not method defined) (8260B-SPCCs = Chloromethane, 1,1-Dichloroethane, Bromoform ≥ 0.1 ; Chlorobenzene, 1,1,2,2-Tetrachloroethane ≥ 0.3)		<u>+</u>		<u>/</u>	
5. Does %Difference/%Drift meet criteria? (624: cmpd specific-Table 5 Q value) (8260B: $\leq 20\%$ for CCCs; $\leq 20\%$ for all cmpds/surrogates if CCCs not on list); (DOD $\pm 20\%$)		<u>+</u>		<u>/</u>	(8260B: %D high, samples ND? List NCM)
6. Are the Internal Standard area responses within method limits? (624 – not method defined) (8260B -- 50% - 200% of ICAL mid pt)		<u>+</u>		<u>/</u>	
7. Are the internal standard retention times within method limits? (624, ± 30 sec of ICAL mid pt) (8260B, ± 30 sec of ICAL mid pt)		<u>+</u>		<u>/</u>	
8. Isomeric pairs checked for elution order and correct peak assignment? - Vinyl Acetate / Isopropyl Ether 1,2- & 1,3- & 1,4-Dichlorobenzene - Ethylbenzene / m- & p-Xylenes - o-Xylene / Styrene 1,3,5- & 1,2,4-Trimethylbenzene / Isopropylbenzene / sec-butylbenzene 2- & 4-Chlorotoluene / n-Propylbenzene - MIBK / 2-Hexanone - Methyl Methacrylate / Ethyl Methacrylate 1,1-Dichloroethene / cis-1,2- & trans-1,2-Dichloroethene 1,2,3- & 1,2,4-Trichlorobenzene 1,1-Dichloropropene / cis-1,3- & trans-1,3-Dichloropropene / 1,2,3-Trichloropropane - Chlorobenzene-d5 / 1,1,1,2-Tetrachloroethane - Trichlorofluoromethane / Freon 113 - Hexane / Vinyl Acetate (Chrom: View/Documents/Methods/Isomers)		<u>+</u>		<u>/</u>	
Were manual integrations performed correctly and properly documented?(dated, initialed and reason given) 2nd review of all MIs required	<u>+</u>			<u>/</u>	

Comments: _____

2nd Reviewer: MMReview Date: 11/9/16

Sequence Name: C:\HPCHEM\1\SEQUENCE\110916am.S

Comment:

Operator: moanm

Data Path: C:\HPCHEM\1\DATA\110916am\

Pre-Seq Cmd:

Post-Seq Cmd:

Test America Denver

Instrument: CH

UV-MS-0010 (82603/524) (Circle)

Purge Volume: (20mL/5mL/5g)

Tune Time: 6:52-18:41 (Circle)

Mass Rate: 350526

Method Sections To Run

On A Barcode Mismatch

(X) Full Method

(X) Inject Anyway

() Reprocessing Only

() Don't Inject

Line Type Vial DataFile Method Sample Name

1 Sample	100	H1441	BFB	bfb
2 Sample	1	H1442	8260	ccv
3 Sample	2	H1443	8260	ccv
4 Sample	3	H1444	8260	lcs
5 Sample	4	H1445	8260	blk
6 Sample	5	H1446	8260	mb
7 Sample	6	H1447	8260	280-90212-B-6 ph<2
8 Sample	7	H1448	8260	280-90212-G-2 ph<2
9 Sample	8	H1449	8260	280-90212-N-4 ph<2
10 Sample	9	H1450	8260	280-90212-H-5 ph<2
11 Sample	10	H1451	8260	280-90364-I-1 ph<2
12 Sample	11	H1452	8260	280-90364-H-1 ph<2 MS
13 Sample	12	H1453	8260	280-90364-H-1 ph<2 MSD
14 Sample	13	H1454	8260	280-90364-B-2 ph<2
15 Sample	14	H1455	8260	280-90364-C-3 ph<2
16 Sample	15	H1456	8260	280-90364-A-4 ph<2
17 Sample	16	H1457	8260	280-90227-F-1 ph<2
18 Sample	17	H1458	8260	280-90227-I-2 ph<2
19 Sample	18	H1459	8260	280-90227-G-3 ph<2
20 Sample	19	H1460	8260	280-90227-G-5 ph<2
21 Sample	20	H1461	8260	280-90232-F-1 ph<2
22 Sample	21	H1462	8260	280-90232-E-2 ph<2 -ssc DME
23 Sample	22	H1463	8260	280-90232-B-3 ph<2
24 Sample	23	H1464	8260	280-90271-C-7 ph<2
25 Sample	24	H1465	8260	280-90250-P-1 ph<2
26 Sample	25	H1466	8260	ccvc
27 Sample	26	H1467	8260	280-90672-K-4 ph<2
28 Sample	27	H1468	8260	280-90672-I-4 ph<2 MS
29 Sample	28	H1469	8260	280-90672-I-4 ph<2 MSD
30 Sample	29	H1470	8260	280-90672-E-5 ph<2
31 Sample	30	H1471	8260	280-90672-A-6 ph<2

W2 52876

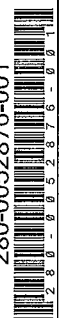
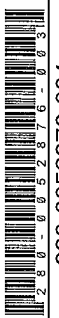
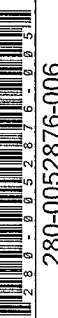
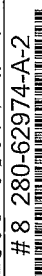
11-13-16

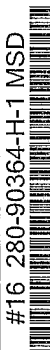
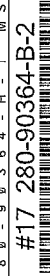
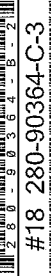
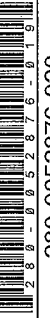
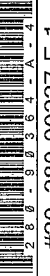
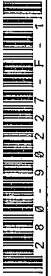
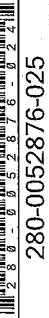
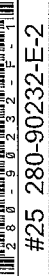
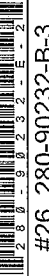
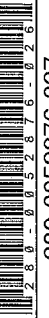
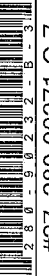
TestAmerica Laboratories
Worklist Report

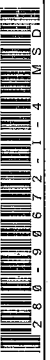
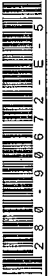
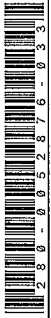
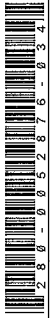
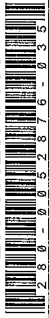
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Instrument Name: VMS_H
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\\Denver\\ChromData\\VMS_H\\20161109-52876.b
Upload Directory: \\CorpTALSAPP16\\280-DN-RawData\\Organics\\MS\\VMS_H
Run Reagent: MV-568718-D_00006 Amount Added: 1.000000, Units: uL
Run Reagent: MV-ARCH SS A_00074 Amount Added: 0.780000, Units: uL

Worklist Number: 52876

Chrom Method: AQ_VMSH_8260
Units: mL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052876-001 	# 1 BFB 	MV-BFB_00021	BFB	voaWater	1.000000	uL	1.000000
280-0052876-002 	# 2 CCV 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018	CCV	voaWater	20.00	mL	1.000000
280-0052876-003 	# 3 CCV 	MV-Supp A_00021	CCV	voaWater	20.00	mL	1.000000
280-0052876-004 	# 4 LCS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	LCS	voaWater	20.00	mL	1.000000
280-0052876-005 	# 5 LCSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	LCSD	voaWater	20.00	mL	1.000000
280-0052876-006 	# 6 MB 		MB	voaWater	20.00	mL	1.000000
280-0052876-007 	# 7 280-62974-A-1 		Client	voaWater	20.00	mL	1.000000
280-0052876-008 	# 8 280-62974-A-2 		Client	voaWater	20.00	mL	1.000000
280-0052876-009 	# 9 280-62974-A-3 		Client	voaWater	20.00	mL	1.000000
280-0052876-010 	# 10 280-90212-B-6 		Client	voaWater	20.00	mL	1.000000
280-0052876-011 	# 11 280-90212-G-2 		Client	voaWater	20.00	mL	1.000000
280-0052876-012 	# 12 280-90212-N-4 		Client	voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052876-013 	#13 280-90212-H-5 		Client	voaWater	20.00	mL	1.000000
280-0052876-014 	#14 280-90364-I-1 		Client	voaWater	20.00	mL	1.000000
280-0052876-015 	#15 280-90364-H-1 MS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	MS	voaWater	20.00	mL	1.000000
280-0052876-016 	#16 280-90364-H-1 MSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	MSD	voaWater	20.00	mL	1.000000
280-0052876-017 	#17 280-90364-B-2 		Client	voaWater	20.00	mL	1.000000
280-0052876-018 	#18 280-90364-C-3 		Client	voaWater	20.00	mL	1.000000
280-0052876-019 	#19 280-90364-A-4 		Client	voaWater	20.00	mL	1.000000
280-0052876-020 	#20 280-90227-F-1 		Client	voaWater	20.00	mL	1.000000
280-0052876-021 	#21 280-90227-I-2 		Client	voaWater	20.00	mL	1.000000
280-0052876-022 	#22 280-90227-G-3 		Client	voaWater	20.00	mL	1.000000
280-0052876-023 	#23 280-90227-G-5 		Client	voaWater	20.00	mL	1.000000
280-0052876-024 	#24 280-90232-F-1 		Client	voaWater	20.00	mL	1.000000
280-0052876-025 	#25 280-90232-E-2 		Client	voaWater	20.00	mL	1.000000
280-0052876-026 	#26 280-90232-B-3 		Client	voaWater	20.00	mL	1.000000
280-0052876-027 	#27 280-90271-C-7 		Client	voaWater	20.00	mL	1.000000
280-0052876-028 	#28 280-90250-P-1 		Client	voaWater	20.00	mL	1.000000
280-0052876-029 	#29 280-90672-K-4 		Client	voaWater	20.00	mL	1.000000
280-0052876-030 	#30 280-90672-I-4 MS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	MS	voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052876-031 	#31 280-90672-I-4 MSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	MSD	voaWater	20.00	mL	1.000000
280-0052876-032 	#32 280-90672-E-5 		Client	voaWater	20.00	mL	1.000000
280-0052876-033 	#33 280-90672-A-6 		Client	voaWater	20.00	mL	1.000000
280-0052876-034 	#34 CCVC 	MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018	CCVC	voaWater	20.00	mL	1.000000
280-0052876-035 	#35 Samp 35 		Client	voaWater	20.00	mL	1.000000

GCMS Volatile CCV & Batch Data Review Checklist

LIMS Batch Number:	Worklist #: 52936	Instrument ID: P
Analyst/1 st Reviewer: JEA	Analytical Method (circle):	
Date: 11/10/16	624 8260B 8260 SIM Other	
QC Type (circle): Standard DOD Q4 DoD Q5 QAPP	Other NCM*	
Matrix (circle one): Water Solid	Circle: 5-mL 20-mL Meth Ext 5 g	

Review Items	NA	Yes	No	2 nd Rev	Comments (List NCM #)
A. Tune & Continuing Calibration					
1. Did BFB meet tune criteria? If CFCs, did autotune meet SOP criteria?		/		/	Time of injection: 0745
2. Was the correct ICAL used for quantitation? Date and instrument ID of ICAL verified? (Check in both Chrom/Target and TALS)		/		/	
3. Is ICAL locked in TALS and Chrom?		/		/	
4. Do RFs meet minimum criteria? (624 – not method defined) (8260B-SPCCs = Chloromethane, 1,1-Dichloroethane, Bromoform ≥ 0.1 ; Chlorobenzene, 1,1,2,2-Tetrachloroethane ≥ 0.3)		/		/	
5. Does %Difference/%Drift meet criteria? (624: cmpd specific-Table 5 Q value) (8260B: $\leq 20\%$ for CCCs; $\leq 20\%$ for all cmpds/surrogates if CCCs not on list); (DOD $\pm 20\%$)		/		/	(8260B: %D high, samples ND? List NCM) chloromethane -20.7%
6. Are the Internal Standard area responses within method limits? (624 – not method defined) (8260B -- 50% - 200% of ICAL mid pt)		/		/	
7. Are the internal standard retention times within method limits? (624, ± 30 sec of ICAL mid pt) (8260B, ± 30 sec of ICAL mid pt)		/		/	
8. Isomeric pairs checked for elution order and correct peak assignment? - Vinyl Acetate / Isopropyl Ether 1,2- & 1,3- & 1,4-Dichlorobenzene - Ethylbenzene / m- & p-Xylenes - o-Xylene / Styrene 1,3,5- & 1,2,4-Trimethylbenzene / Isopropylbenzene / sec-butylbenzene 2- & 4-Chlorotoluene / n-Propylbenzene - MIBK / 2-Hexanone - Methyl Methacrylate / Ethyl Methacrylate 1,1-Dichloroethene / cis-1,2- & trans-1,2-Dichloroethene 1,2,3- & 1,2,4-Trichlorobenzene 1,1-Dichloropropene / cis-1,3- & trans-1,3-Dichloropropene / 1,2,3-Trichloropropane - Chlorobenzene-d5 / 1,1,1,2-Tetrachloroethane - Trichlorofluoromethane / Freon 113 - Hexane / Vinyl Acetate (Chrom: View/Documents/Methods/Isomers)		/		/	
Were manual integrations performed correctly and properly documented?(dated, initialed and reason given) 2nd review of all MIs required		/		/	

Comments:

2nd Reviewer:

Review Date:

Sequence Name: C:\HPCHEM\1\SEQUENCE\111016.S

Comment:

Operator: SEIFERTJ

Data Path: C:\HPCHEM\1\DATA\111016\

Pre-Seq Cmd:

Post-Seq Cmd:

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Instrument: Denver

Document: P

AMS-0010 (82603/624) (Circle)

Surge Volume: (20mL/5mL/5g)

Run Time: (Circle)

0745-1918
350442

Line Type Vial DataFile Method Sample Name

1 Sample	100	P3843	BFB	BFB	0745
2 Sample	10	P3844	8260	CCV	
3 Sample	11	P3845	8260	CCV	
4 Sample	12	P3846	8260	LCS	
5 Sample	13	P3847	8260	LCSD	} spike & RR
6 Sample	14	P3848	8260	MB	
7 Sample	15	P3849	8260	LCS RR	
8 Sample	16	P3850	8260	280-90229-b-9 PH<2	
9 Sample	17	P3851	8260	280-90229-g-8 PH<2	SSAND
10 Sample	18	P3852	8260	280-90220-b-13 PH<2	
11 Sample	19	P3853	8260	280-90320-b-10 PH<2	
12 Sample	20	P3854	8260	280-90320-h-11 PH<2	
13 Sample	21	P3855	8260	280-90229-g-6 5ML PH<2	6 SSAND matrix
14 Sample	22	P3856	8260	280-90229-g-6 0.5ML PH<2	15 ↑ E
15 Sample	23	P3857	8260	280-90229-d-6 5mL MS PH<2	15 ↑
16 Sample	24	P3858	8260	280-90229-d-6 5ML MSD PH<2	15 ↑ ↓
17 Sample	25	P3859	8260	280-90229-b-1 PH<2	15 ↑
18 Sample	26	P3860	8260	BLK	
19 Sample	27	P3861	8260	BLK	
20 Sample	28	P3862	8260	BLK	} cleanup
21 Sample	29	P3863	8260	BLK	
22 Sample	30	P3864	8260	280-90232-f-2 PH<2	
23 Sample	31	P3865	8260	280-90253-d-2 PH<2	
24 Sample	32	P3866	8260	280-90279-b-11 PH<2	
25 Sample	33	P3867	8260	280-90235-k-1 PH<2	
26 Sample	34	P3868	8260	280-90235-k-2 PH<2	
27 Sample	35	P3869	8260	280-90229-e-2 PH<2	
28 Sample	36	P3870	8260	280-90229-a-4 PH<2	
29 Sample	37	P3871	8260	280-90236-e-2 PH<2	
30 Sample	38	P3872	8260	280-90237-A-1 PH<2	15 ↑ matrix
31 Sample	39	P3873	8260	CCVC	15 ↑
32 Sample	40	P3874	8260	280-90296-b-1 PH<2	15 ↑ ND
33 Sample	41	P3875	8260	280-90296-b-2 PH<2	15 ↑ ND
34 Sample	42	P3876	8260	280-90303-b-6 PH<2	
35 Sample	43	P3877	8260	280-90229-g-6 .05mL PH<2	
36 Sample	44	P3878	8260	CCVC	15 ↑ 19.18
37 Sample	45	P3879	8260	PRIMER	
38 Sample	46	P3880	8260	PRIMER	

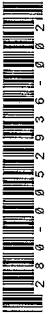
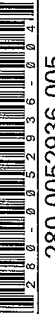
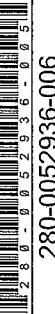
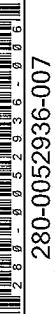
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11/11/16

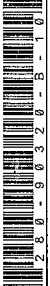
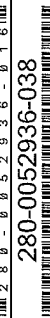
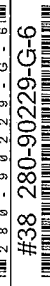
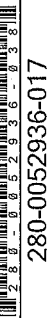
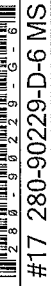
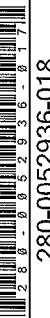
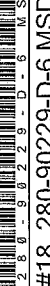
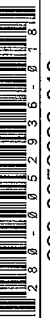
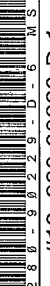
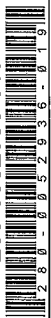
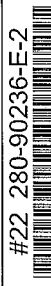
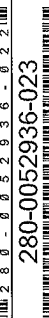
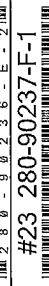
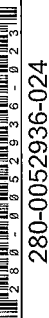
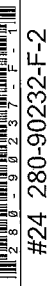
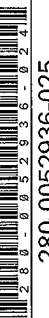
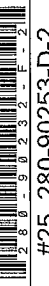
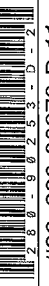
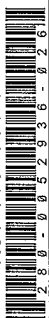
TestAmerica Laboratories
Worklist Report

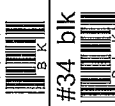
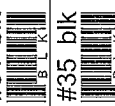
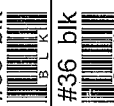
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Instrument Name: VMS_P
Purge Volume: 20.00
Analysis Type: VOA
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Upload Directory: \\CorpTALSAPP16\\280-DN-RawData\\Organics\\MS\\VMS_P
Run Reagent: MV-567649-D_00001
Run Reagent: MV-ARCH SS A_00074

Worklist Number: 52936
Chrom Method: AQ_VMSP_8260
Units: mL

Amount Added: 1.000000, Units: uL
Amount Added: 0.920000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052936-001 	# 1 BFB 	MV-BFB_00021	BFB	voaWater	1.000000	uL	1.000000
280-0052936-002 	# 2 CCV 	MV-Main A_00027 MV-Gas/Ket A_00052 MV-2Cleve+AVA_00018 MV-567649-D_00001	CCV	voaWater	20.00	mL	1.000000
280-0052936-003 	# 3 CCV 	MV-Supp A_00021	CCV	voaWater	20.00	mL	1.000000
280-0052936-004 	# 4 LCS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	LCS	voaWater	20.00	mL	1.000000
280-0052936-005 	# 5 LCSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	LCSD	voaWater	20.00	mL	1.000000
280-0052936-006 	# 6 MB 		MB	voaWater	20.00	mL	1.000000
280-0052936-007 	# 7 280-62974-A-1 		Client	voaWater	20.00	mL	1.000000
280-0052936-008 	# 8 280-62974-A-2 		Client	voaWater	20.00	mL	1.000000
280-0052936-009 	# 9 280-62974-A-3 		Client	voaWater	20.00	mL	1.000000
280-0052936-010 	# 10 280-90229-G-8 		Client	voaWater	20.00	mL	1.000000
280-0052936-011 	# 11 280-90229-B-9 		Client	voaWater	20.00	mL	1.000000
280-0052936-012 	# 12 280-90220-B-13 		Client	voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052936-013 	#13 280-90320-B-10 		Client	voaWater	20.00	mL	1.000000
280-0052936-014 	#14 280-90320-H-11 		Client	voaWater	20.00	mL	1.000000
280-0052936-015 	#15 280-90229-G-6 		Client	voaWater	20.00	mL	4.000000
280-0052936-016 	#16 280-90229-G-6 		Client	voaWater	20.00	mL	40.00
280-0052936-038 	#38 280-90229-G-6 		Client	voaWater	20.00	mL	400.0
280-0052936-017 	#17 280-90229-D-6 MS 	MV-SS 2-Cleve_00030 MV-Gas/Ket B_00030 MV-Main B_00016	MS	voaWater	20.00	mL	4.000000
280-0052936-018 	#18 280-90229-D-6 MSD 	MV-SS 2-Cleve_00030 MV-Gas/Ket B_00030 MV-Main B_00016	MSD	voaWater	20.00	mL	4.000000
280-0052936-019 	#19 280-90229-B-1 		Client	voaWater	20.00	mL	1.000000
280-0052936-020 	#20 280-90229-E-2 		Client	voaWater	20.00	mL	1.000000
280-0052936-021 	#21 280-90229-A-4 		Client	voaWater	20.00	mL	1.000000
280-0052936-022 	#22 280-90236-E-2 		Client	voaWater	20.00	mL	1.000000
280-0052936-023 	#23 280-90237-F-1 		Client	voaWater	20.00	mL	1.000000
280-0052936-024 	#24 280-90232-F-2 		Client	voaWater	20.00	mL	1.000000
280-0052936-025 	#25 280-90253-D-2 		Client	voaWater	20.00	mL	1.000000
280-0052936-026 	#26 280-90279-B-11 		Client	voaWater	20.00	mL	1.000000
280-0052936-027 	#27 280-90235-K-1 		Client	voaWater	20.00	mL	1.000000
280-0052936-028 	#28 280-90235-K-2 		Client	voaWater	20.00	mL	1.000000
280-0052936-029 	#29 280-90296-H-1 		Client	voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052936-030 	#30 280-90296-B-2 		Client	voaWater	20.00	mL	1.000000
280-0052936-031 	#31 280-90303-B-6 		Client	voaWater	20.00	mL	1.000000
280-0052936-032 	#32 CCVC 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00018	CCVC	voaWater	20.00	mL	1.000000
280-0052936-033 	#33 blk 		Client	voaWater	20.00	mL	1.000000
280-0052936-034 	#34 blk 		Client	voaWater	20.00	mL	1.000000
280-0052936-035 	#35 blk 		Client	voaWater	20.00	mL	1.000000
280-0052936-036 	#36 blk 		Client	voaWater	20.00	mL	1.000000
280-0052936-037 	#37 CCVC 	MV-2cleve+AVA_00018 MV-Gas/Ket A_00052 MV-Main A_00027	CCVC	voaWater	20.00	mL	1.000000
280-0052936-039 	#39 primer 		Client	voaWater	20.00	mL	1.000000
280-0052936-040 	#40 primer 		Client	voaWater	20.00	mL	1.000000

GCMS Volatile ICAL Data Review Checklist

Main/Supp

LIMS Batch Number: 345574	Worklist #: 51654	ICAL Event #: 27259/27260	ICIS/ICV Line #s: 27 ^{main} 23 ^{supp} 30	2 nd Day ICV Line# —	Instrument ID: H
2 nd Day Batch/ICV Lines:					
Analyst/1 st Reviewer: M	Prep Method (circle): 5030 5035-L 5035-H		Analytical Method (circle): 624 (8260B) SIM Other _____		
Date: 10-9-16					
QC Type (circle): Standard (DOD Q4) (DoD Q5)	QAPP		Other _____		
Matrix (circle one): (Water) Solid	Circle: 5-mL (20-mL) Meth Ext 5 g				

Review Items	NA	Yes	No	2 nd Rev	Comments
A. Tune / Calibration					
1. Did BFB meet tune criteria? If CFCs, did autotune meet SOP criteria?		+		/	
2. Were all standards injected within 12 hours of the BFB? (or 24 hours for 624?)		+		/	
3. Were ≥ 5 levels of each compound and surrogate analyzed? (624 has minimum of four standards)		+		/	
4. Was low level standard at or below RL?		+		/	
5. If calibration points removed, were reasons for removal documented? Did sufficient calibration points remain? (removal from middle of curve not allowed)		+		/	(Other than those stated in SOP)
6. Do the average RFs meet minimum RF requirements? (624 – not method defined) (8260B-SPCCs = Chloromethane, 1,1-Dichloroethane, Bromoform ≥ 0.1 ; Chlorobenzene, 1,1,2,2-Tetrachloroethane ≥ 0.3)		+		/	
7. Did the calibration %RSD meet method requirements? (624: $\leq 35\%$ all cmpds) (8260B: $\leq 30\%$ for CCCs & $\leq 15\%$ for all other cmpds/surrogates)		+		/	
8. Was a linear or quadratic regression fit used for analytes that exceeded the %RSD requirements?		+		/	
9. If regression fit used, is $r^2 \geq 0.990$?		+		/	
10. At least 6 consecutive points used for quadratic curves?	+			/	
11. For quadratic – examine plot: Is a tangent's slope to the curve entirely positive or negative and continuous? (does not flatten or recurve within the range of calibration)	+			/	
12. For quadratic – evaluate curve fitting errors: Does each point fall within criteria when 'read-back' against the curve? (TA requirement – CA-Q-S-005); (recommended limits $\pm 30\%$ low point & $\pm 20\%$ all other points) (Chrom Report = Details of Calibration per Analyte)	+			/	
13. Is the concentration intercept $< RL $ for each cmpd? ("X" intercept in Chrom)		+		/	
Were manual integrations performed correctly and properly documented? (dated, initialed and reason given) 2 nd review of all MIs required		+		/	
14. Was the high point checked for detector saturation?		+		/	

NOT CALIBRATED:

2-Cleve
Ethanol

Review Items	NA	Yes	No	2nd Rev	Comments
15. Isomeric pairs (checked for elution order/correct peak assignment?) • Vinyl Acetate / Isopropyl Ether • 1,2- & 1,3- & 1,4-Dichlorobenzene • Ethylbenzene / m- & p-Xylenes • o-Xylene / Styrene • 1,3,5- & 1,2,4-Trimethylbenzene / Isopropylbenzene / sec-butylbenzene • 2-nitropropane between bromodichloromethane & MIBK • 2- & 4-Chlorotoluene / n-Propylbenzene • MIBK / 2-Hexanone • Methyl Methacrylate / Ethyl Methacrylate • 1,1-Dichloroethene / cis-1,2- & trans-1,2-Dichloroethene • 1,2,3- & 1,2,4-Trichlorobenzene • 1,1-Dichloropropene / cis-1,3- & trans-1,3-Dichloropropene / 1,2,3-Trichloropropane • Chlorobenzene-d5 / 1,1,1,2-Tetrachloroethane • Trichlorofluoromethane / Freon 113 • Hexane / Vinyl Acetate (Chrom: View/Documents/Methods/Isomers)		X		/	
16. Was the 2nd source initial calibration verification standard (ICV) within required criteria? (624 = QCS method defined/Table5) (8260B = SOP defined) (DoD = ±20%) QAPP specific _____		+		/	
17. Was the ICV Target report printed and elution order of all analytes verified? (attach at L1 Review)		+		/	If No, immediate corrective action required <i>checked</i>
18. If any criteria from items 1-17 were not met, was a NCM generated and supervisor copied?	+			/	
19. Are all files and QC linked and processed correctly?		+		/	☐ Files linked properly to calibration levels? ☐ All points are in the most recent active calibration event? [Calibration Events – 'Fix ICAL linkage' if needed] ☐ Runs linked to BFB? [QC links] ☐ Checklist & run log scanned, attached & assigned properly?
20. Is the ICAL locked in TALS and Chrom?		+		/	
21. ICAL Date and Instrument ID verified?		+		/	

Comments: _____

2nd Reviewer: _____

Review Date: _____

10/10/16

10-9-16

Sequence Name: C:\HPCHEM\1\SEQUENCE\100716pm.S

Comment:

Operator: bergerb

Data Path: C:\HPCHEM\1\DATA\100716pm\

Pre-Seq Cmd:

Post-Seq Cmd:

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Test America Denver

instrument: H

DV-MS-0010 (82603/624) (Circle)

Purge Volume: (20mL/5mL/5g)

Tune Time: 21:00 - 8:10 (Circle)

Lims Batch: 345574

Line Type Vial DataFile Method Sample Name

1 Sample	30	H9949	8260	primer
2 Sample	31	H9950	8260	primer
3 Sample	100	H9951	BFB	BFB
4 Sample	100	H9952	BFB	BFB
5 Sample	1	H9953	8260	blank
6 Sample	2	H9954	8260	blank
7 Sample	100	H9955	BFB	BFB
8 Sample	1	H9956	8260	blank
9 Sample	2	H9957	8260	blank
10 Sample	3	H9958	8260	IC
11 Sample	4	H9959	8260	IC
12 Sample	5	H9960	8260	IC
13 Sample	6	H9961	8260	IC
14 Sample	7	H9962	8260	IC
15 Sample	8	H9963	8260	IC
16 Sample	9	H9964	8260	IC
17 Sample	10	H9965	8260	blank
18 Sample	11	H9966	8260	ICV
19 Sample	12	H9967	8260	IC
20 Sample	13	H9968	8260	IC
21 Sample	14	H9969	8260	IC
22 Sample	15	H9970	8260	ICIS
23 Sample	16	H9971	8260	IC
24 Sample	17	H9972	8260	IC
25 Sample	18	H9973	8260	blank
26 Sample	19	H9974	8260	ICV
27 Sample	20	H9975	8260	mdlv1
28 Sample	21	H9976	8260	mdlv2
29 Sample	22	H9977	8260	mdlv3
30 Sample	23	H9978	8260	mdlv4
31 Sample	24	H9979	8260	mdlv5
32 Sample	25	H9980	8260	mdlv7
33 Sample	26	H9981	8260	mdlv8
34 Sample	27	H9982	8260	mdlv9
35 Sample	28	H9983	8260	mdlv10
36 Sample	29	H9984	8260	mdlv11
37 Sample	1	H9985	8260	primer
38 Sample	2	H9986	8260	primer

W 51682

M

10-9-16

TestAmerica Laboratories
Worklist Report

Worklist Name: 100716pm
 Instrument Name: VMS_H
 Purge Volume: 20.00
 Analysis Type: VOA
 Batch Directory: \\ChromNALDenver\ChromData\VMS_H\20161007-51654.b
 Upload Directory: \\CorptALSAPP16\280-DN-RawData\Organics\VMS_H
 Run Reagent: MV-568718-D_00006 Amount Added: 1.000000, Units: uL
 Run Reagent: MV-ARCH SS A_00074 Amount Added: 0.840000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0051654-001	#1 BFB	MV-BFB_00021	BFB		voaWater	1.000000	uL	1.000000
280-0051654-002	#2 CCV	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2Cleve+AVA_00017	CCV		voaWater	20.00	mL	1.000000
280-0051654-003	#3 CCV	MV-Supp A_00021	CCV		voaWater	20.00	mL	1.000000
280-0051654-004	#4 LCS	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029	LCS		voaWater	20.00	mL	1.000000
280-0051654-005	#5 LCSD	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029	LCSD		voaWater	20.00	mL	1.000000
280-0051654-006	#6 MB		MB		voaWater	20.00	mL	1.000000
280-0051654-007	#7 280-62974-A-1		Client		voaWater	20.00	mL	1.000000
280-0051654-008	#8 280-62974-A-2		Client		voaWater	20.00	mL	1.000000
280-0051654-009	#9 280-62974-A-3		Client		voaWater	20.00	mL	1.000000
280-0051654-010	#10 primer		Client		voaWater	20.00	mL	1.000000
280-0051654-011	#11 primer		Client		voaWater	20.00	mL	1.000000
280-0051654-012	#12 blank		Client		voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0051654-013	#13 blank BLANK		Client		voaWater	20.00	mL	1.000000
280-0051654-014	#14 blank BLANK		Client		voaWater	20.00	mL	1.000000
280-0051654-015	#15 blank BLANK		Client		voaWater	20.00	mL	1.000000
280-0051654-016	#16 IC IC	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2clev+AVA_00017	IC		1 voaWater	20.00	mL	1.000000
280-0051654-017	#17 IC IC	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2clev+AVA_00017	IC		2 voaWater	20.00	mL	1.000000
280-0051654-018	#18 IC IC	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2clev+AVA_00017	IC		3 voaWater	20.00	mL	1.000000
280-0051654-019	#19 IC IC	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2clev+AVA_00017	IC		4 voaWater	20.00	mL	1.000000
280-0051654-020	#20 IC IC	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2clev+AVA_00017	IC		5 voaWater	20.00	mL	1.000000
280-0051654-021	#21 IC IC	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2clev+AVA_00017	IC		6 voaWater	20.00	mL	1.000000
280-0051654-022	#22 IC IC	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2clev+AVA_00017	IC		7 voaWater	20.00	mL	1.000000
280-0051654-023	#23 ICV ICV	MV-568718-D_00006 MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2.Cleve_00029	ICV		voaWater	20.00	mL	1.000000
280-0051654-024	#24 IC IC	MV-568718-D_00006 MV-Supp A_00021 MV-ARCH SS A_00074	IC		2 voaWater	20.00	mL	1.000000
280-0051654-025	#25 IC IC	MV-568718-D_00006 MV-Supp A_00021 MV-ARCH SS A_00074	IC		3 voaWater	20.00	mL	1.000000
280-0051654-026	#26 IC IC	MV-568718-D_00006 MV-Supp A_00021 MV-ARCH SS A_00074	IC		4 voaWater	20.00	mL	1.000000
280-0051654-027	#27 ICIS ICIS	MV-568718-D_00006 MV-Supp A_00021 MV-ARCH SS A_00074	ICIS		5 voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0051654-028	#28 IC	MV-568718-D_00006 MV-Supp A_00021 MV-ARCH SS A_00074	IC	6	voaWater	20.00	mL	1.000000
280-0051654-029	#29 IC	MV-568718-D_00006 MV-Supp A_00021 MV-ARCH SS A_00074	IC	7	voaWater	20.00	mL	1.000000
280-0051654-030	#30 ICV	MV-568718-D_00006 MV-Supp B_00014 MV-ARCH SS A_00074	ICV		voaWater	20.00	mL	1.000000
280-0051654-031	#31 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-032	#32 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-033	#33 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-034	#34 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-035	#35 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-036	#36 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-037	#37 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-038	#38 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-039	#39 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-040	#40 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-041	#41 mdlv		MDLV		voaWater	20.00	mL	1.000000
280-0051654-042	#42 Samp 42		Client		voaWater	20.00	mL	1.000000

Main/GAS/surrogate

GCMS Volatile ICAL Data Review Checklist

Not Calibrated For 2-pentane

LIMS Batch Number: 347337	Worklist #: 52083	ICAL Event #: 27333	ICIS/ICV Line #s: 14 / 17	2 nd Day ICV Line# N/A	Instrument ID: P
2 nd Day Batch/ICV Lines: N/A					
Analyst/1 st Reviewer: Date: 10/20/16	Prep Method (circle): 5030 5035-L 5035-H		Analytical Method (circle): 624 8260B SIM Other		
QC Type (circle): Standard DOD Q4 DoD Q5 QAPP Other					
Matrix (circle one): Water Solid			Circle: 5-mL 20-mL Meth Ext 5 g		

Review Items	NA	Yes	No	2 nd Rev	Comments
A. Tune / Calibration					
1. Did BFB meet tune criteria? If CFCs, did autotune meet SOP criteria?		/		/	
2. Were all standards injected within 12 hours of the BFB? (or 24 hours for 624?)		/		/	
3. Were ≥ 5 levels of each compound and surrogate analyzed? (624 has minimum of four standards)		/		/	
4. Was low level standard at or below RL?				/	
5. If calibration points removed, were reasons for removal documented? Did sufficient calibration points remain? (removal from middle of curve not allowed)		/		/	(Other than those stated in SOP)
6. Do the average RFs meet minimum RF requirements? (624 – not method defined) (8260B-SPCCs = Chloromethane, 1,1-Dichloroethane, Bromoform ≥ 0.1 ; Chlorobenzene, 1,1,2,2-Tetrachloroethane ≥ 0.3)		/		/	
7. Did the calibration %RSD meet method requirements? (624: $\leq 35\%$ all cmpds) (8260B: $\leq 30\%$ for CCCs & $\leq 15\%$ for all other cmpds/surrogates)		/		/	
8. Was a linear or quadratic regression fit used for analytes that exceeded the %RSD requirements?		/		/	
9. If regression fit used, is $r^2 \geq 0.990$?		/		/	
10. At least 6 consecutive points used for quadratic curves?	/			/	
11. For quadratic – examine plot: Is a tangent's slope to the curve entirely positive or negative and continuous? (does not flatten or recurve within the range of calibration)	/			/	
12. For quadratic – evaluate curve fitting errors: Does each point fall within criteria when 'read-back' against the curve? (TA requirement – CA-Q-S-005); (recommended limits $\pm 30\%$ low point & $\pm 20\%$ all other points) (Chrom Report = Details of Calibration per Analyte)	/			/	
13. Is the concentration intercept $< RL $ for each cmpd? ("X" intercept in Chrom)		/		/	
Were manual integrations performed correctly and properly documented? (dated, initialed and reason given) 2 nd review of all MIs required		/		/	1, 2, 3, 4, 5, 6, 7 ICV
14. Was the high point checked for detector saturation?		/		/	

Review Items	NA	Yes	No	2nd Rev	Comments
15. Isomeric pairs (checked for elution order/correct peak assignment?) • Vinyl Acetate / Isopropyl Ether • 1,2- & 1,3- & 1,4-Dichlorobenzene • Ethylbenzene / m- & p-Xylenes • o-Xylene / Styrene • 1,3,5- & 1,2,4-Trimethylbenzene / Isopropylbenzene / sec-butylbenzene • 2-nitropropane between bromodichloromethane & MIBK • 2- & 4-Chlorotoluene / n-Propylbenzene • MIBK / 2-Hexanone • Methyl Methacrylate / Ethyl Methacrylate • 1,1-Dichloroethene / cis-1,2- & trans-1,2-Dichloroethene • 1,2,3- & 1,2,4-Trichlorobenzene • 1,1-Dichloropropene / cis-1,3- & trans-1,3-Dichloropropene / 1,2,3-Trichloropropane • Chlorobenzene-d5 / 1,1,1,2-Tetrachloroethane • Trichlorofluoromethane / Freon 113 • Hexane / Vinyl Acetate (Chrom: View/Documents/Methods/Isomers)					
16. Was the 2nd source initial calibration verification standard (ICV) within required criteria? (624 = QCS method defined/Table5) (8260B = SOP defined) (DoD = $\pm 20\%$) QAPP specific					
17. Was the ICV Target report printed and elution order of all analytes verified? (attach at L1 Review)					If No, immediate corrective action required
18. If any criteria from items 1-17 were not met, was a NCM generated and supervisor copied?					
19. Are all files and QC linked and processed correctly?					☐ Files linked properly to calibration levels? ☐ All points are in the most recent active calibration event? [Calibration Events – 'Fix ICAL linkage' if needed] ☐ Runs linked to BFB? [QC links] ☐ Checklist & run log scanned, attached & assigned properly?
20. Is the ICAL locked in TALS and Chrom?					
21. ICAL Date and Instrument ID verified?					

Comments:

2nd Reviewer:

Review Date: 10/20/16

Sequence Name: C:\HPCHEM\1\SEQUENCE\102016I.S

Comment:

Operator: SEIFERTJ

Data Path: C:\HPCHEM\1\DATA\102016I\

Pre-Seq Cmd:

Post-Seq Cmd:

Test America Denver

Instrument:

DV-MS-0010 (82605/624) (Circle)

Purge Volume: (20mL/5mL/5g)

Tune Time:

(Circle) 0731-20:17

Lims Batch:

347337

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	P2898	BFB	BFB 0731
2	Sample	10	P2899	8260	CCV
3	Sample	11	P2900	8260	STD003
4	Sample	12	P2901	8260	STD010
5	Sample	13	P2902	8260	STD020
6	Sample	14	P2903	8260	STD050
7	Sample	15	P2904	8260	ICIS
8	Sample	16	P2905	8260	STD30
9	Sample	17	P2906	8260	STD60
10	Sample	18	P2907	8260	BLK
11	Sample	19	P2908	8260	ICV
12	Sample	20	P2909	8260	MB
13	Sample	21	P2910	8260	LCS
14	Sample	22	P2911	8260	LCSD
15	Sample	23	P2912	8260	280-89406-c-5 PH<2
16	Sample	24	P2913	8260	280-89362-j-1 PH=4*
17	Sample	25	P2914	8260	280-89362-k-1 MS PH=4
18	Sample	26	P2915	8260	280-89362-k-1 MSD PH=4
19	Sample	27	P2916	8260	280-89362-e-2 PH<2
20	Sample	28	P2917	8260	LCSD RR
21	Sample	29	P2918	8260	280-89362-a-4 PH<2
22	Sample	30	P2919	8260	280-89587-a-2 PH<2
23	Sample	31	P2920	8260	280-89362-e-3 PH<2
24	Sample	32	P2921	8260	280-89428-d-2 PH<2
25	Sample	33	P2922	8260	280-89428-d-3 PH<2
26	Sample	34	P2923	8260	280-89428-a-4 PH<2
27	Sample	35	P2924	8260	280-89269-b-9 PH<2
28	Sample	36	P2925	8260	280-89505-b-9 PH<2
29	Sample	37	P2926	8260	280-89505-b-13 PH<2
30	Sample	38	P2927	8260	280-89505-d-14 PH<2
31	Sample	39	P2928	8260	280-89505-b-17 PH<2
32	Sample	40	P2929	8260	CCVC
33	Sample	41	P2930	8260	280-89428-d-5 PH<2
34	Sample	42	P2931	8260	280-89428-d-5 2ML PH<2
35	Sample	43	P2932	8260	280-89428-d-6 PH<2
36	Sample	44	P2933	8260	280-89428-b-1 PH<2

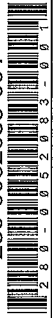
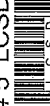
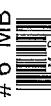
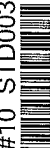
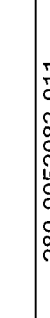
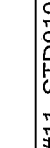
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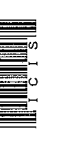
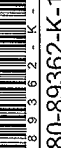
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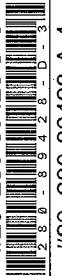
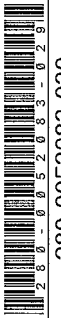
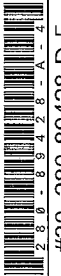
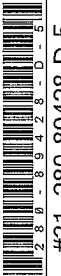
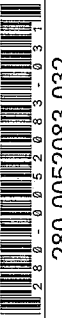
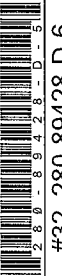
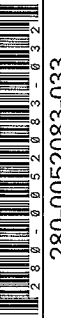
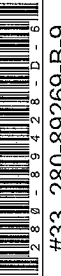
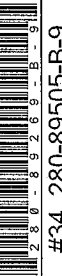
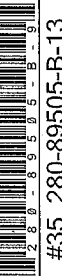
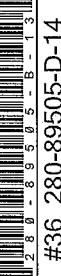
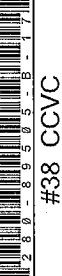
TestAmerica Laboratories
Worklist Report

Worklist Name: 1020161
Instrument Name: VMS_P
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\\Denver\\ChromData\\VMS_PL\\20161020-52083.b
Upload Directory: \\CorpTAL\\SAPP\\16\\280-DN-RawData\\Organics\\MS\\VMS_P
Run Reagent: MV-567649-D_00001
Run Reagent: MV-ARCH SS A_00074

Worklist Number: 52083
Chrom Method: AQ_VMSP_8260
Units: mL
Amount Added: 1.000000, Units: uL
Amount Added: 0.920000, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
 280-0052083-001	# 1 BFB 	MV-BFB_00021	BFB		voaWater	1.000000	uL	1.000000
 280-0052083-002	# 2 CCV 	MV-567649-D_00001 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00017	CCV		voaWater	20.00	mL	1.000000
 280-0052083-003	# 3 CCV 	MV-Supp A_00021 MV-567649-D_00001	CCV		voaWater	20.00	mL	1.000000
 280-0052083-004	# 4 LCS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029	LCS		voaWater	20.00	mL	1.000000
 280-0052083-005	# 5 LCSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029	LCSD		voaWater	20.00	mL	1.000000
 280-0052083-006	# 6 MB 		MB		voaWater	20.00	mL	1.000000
 280-0052083-007	# 7 280-62974-A-1 		Client		voaWater	20.00	mL	1.000000
 280-0052083-008	# 8 280-62974-A-2 		Client		voaWater	20.00	mL	1.000000
 280-0052083-009	# 9 280-62974-A-3 		Client		voaWater	20.00	mL	1.000000
 280-0052083-010	#10 STD003 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00017 MV-ARCH SS A_00074 MV-567649-D_00001	IC	1	voaWater	20.00	mL	1.000000
 280-0052083-011	#11 STD010 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00017 MV-ARCH SS A_00074 MV-567649-D_00001	IC	2	voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
 280-0052083-012	#12 STD020 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00017 MV-ARCH SS A_00074 MV-567649-D_00001	IC	3	voaWater	20.00	mL	1.000000
 280-0052083-013	#13 STD050 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00017 MV-ARCH SS A_00074 MV-567649-D_00001	IC	4	voaWater	20.00	mL	1.000000
 280-0052083-014	#14 ICIS 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00017 MV-ARCH SS A_00074 MV-567649-D_00001	ICIS	5	voaWater	20.00	mL	1.000000
 280-0052083-015	#15 STD30 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00017 MV-ARCH SS A_00074 MV-567649-D_00001	IC	6	voaWater	20.00	mL	1.000000
 280-0052083-016	#16 STD60 	MV-Gas/Ket A_00052 MV-Main A_00027 MV-2cleve+AVA_00017 MV-ARCH SS A_00074 MV-567649-D_00001	IC	7	voaWater	20.00	mL	1.000000
 280-0052083-017	#17 ICV 	MV-SS 2-Cleve_00029 MV-Gas/Ket B_00030 MV-Main B_00016 MV-ARCH SS A_00074 MV-567649-D_00001	ICV		voaWater	20.00	mL	1.000000
 280-0052083-018	#18 280-89406-C-5 		Client		voaWater	20.00	mL	1.000000
 280-0052083-019	#19 280-89362-J-1 		Client		voaWater	20.00	mL	1.000000
 280-0052083-020	#20 280-89362-K-1 MS 	MV-SS 2-Cleve_00029 MV-Gas/Ket B_00030 MV-Main B_00016	MS		voaWater	20.00	mL	1.000000
 280-0052083-021	#21 280-89362-K-1 MSD 	MV-SS 2-Cleve_00029 MV-Gas/Ket B_00030 MV-Main B_00016	MSD		voaWater	20.00	mL	1.000000
 280-0052083-022	#22 280-89362-E-2 		Client		voaWater	20.00	mL	1.000000
 280-0052083-023	#23 280-89362-E-3 		Client		voaWater	20.00	mL	1.000000
 280-0052083-024	#24 280-89362-A-4 		Client		voaWater	20.00	mL	1.000000
 280-0052083-025	#25 280-89587-A-2 		Client		voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
 280-0052083-026	#26 280-89428-B-1 		Client		voaWater	20.00	mL	1.000000
 280-0052083-027	#27 280-89428-D-2 		Client		voaWater	20.00	mL	1.000000
 280-0052083-028	#28 280-89428-D-3 		Client		voaWater	20.00	mL	1.000000
 280-0052083-029	#29 280-89428-A-4 		Client		voaWater	20.00	mL	1.000000
 280-0052083-030	#30 280-89428-D-5 		Client		voaWater	20.00	mL	1.000000
 280-0052083-031	#31 280-89428-D-5 		Client		voaWater	20.00	mL	10.00
 280-0052083-032	#32 280-89428-D-6 		Client		voaWater	20.00	mL	1.000000
 280-0052083-033	#33 280-89269-B-9 		Client		voaWater	20.00	mL	1.000000
 280-0052083-034	#34 280-89505-B-9 		Client		voaWater	20.00	mL	1.000000
 280-0052083-035	#35 280-89505-B-13 		Client		voaWater	20.00	mL	1.000000
 280-0052083-036	#36 280-89505-D-14 		Client		voaWater	20.00	mL	1.000000
 280-0052083-037	#37 280-89505-B-17 		Client		voaWater	20.00	mL	1.000000
 280-0052083-038	#38 CCVC 	MV-2cleve+AVA_00017 MV-Gas/Ket A_00052 MV-Main A_00027	CCVC		voaWater	20.00	mL	1.000000

GCMS Volatile ICAL Data Review Checklist

Man/Gras/2-Cleve/SS

LIMS Batch Number: 349323	Worklist #: 52585	ICAL Event #: 27466	ICIS/ICV Line #s: 14 17	2 nd Day ICV Line# —	Instrument ID: H
2 nd Day Batch/ICV Lines: _____					
Analyst/1 st Reviewer: MM		Prep Method (circle): 5030 5035-L 5035-H		Analytical Method (circle): 624 8260B SIM Other	
Date: 11-2-16					
QC Type (circle): Standard		DOD Q4		DOD Q5	
Matrix (circle one): Water		Solid		Circle: 5-mL 20-mL Meth Ext 5 g	

Review Items	NA	Yes	No	2 nd Rev	Comments
A. Tune / Calibration					
1. Did BFB meet tune criteria? If CFCs, did autotune meet SOP criteria?		+		α	
2. Were all standards injected within 12 hours of the BFB? (or 24 hours for 624?)		+		α	
3. Were ≥ 5 levels of each compound and surrogate analyzed? (624 has minimum of four standards)		+		α	
4. Was low level standard at or below RL?		+		α	
5. If calibration points removed, were reasons for removal documented? Did sufficient calibration points remain? (removal from middle of curve not allowed)		+		α	(Other than those stated in SOP)
6. Do the average RFs meet minimum RF requirements? (624 – not method defined) (8260B-SPCCs = Chloromethane, 1,1-Dichloroethane, Bromoform ≥0.1; Chlorobenzene, 1,1,2,2-Tetrachloroethane ≥0.3)		+		α	
7. Did the calibration %RSD meet method requirements? (624: ≤35% all cmpds) (8260B: ≤30% for CCCs & ≤15% for all other cmpds/surrogates)		+		α	
8. Was a linear or quadratic regression fit used for analytes that exceeded the %RSD requirements?		+		α	
9. If regression fit used, is $r^2 \geq 0.990$?		+		α	
10. At least 6 consecutive points used for quadratic curves?		+		α	
11. For quadratic – examine plot: Is a tangent's slope to the curve entirely positive or negative and continuous? (does not flatten or recurve within the range of calibration)		+		α	
12. For quadratic – evaluate curve fitting errors: Does each point fall within criteria when 'read-back' against the curve? (TA requirement – CA-Q-S-005); (recommended limits ±30% low point & ±20% all other points) (Chrom Report = Details of Calibration per Analyte)		+		α	
13. Is the concentration intercept < RL for each cmpd? ("X" intercept in Chrom)		+		α	
Were manual integrations performed correctly and properly documented? (dated, initialed and reason given) 2 nd review of all MIs required		+		α	
14. Was the high point checked for detector saturation?		+		α	

Review Items	NA	Yes	No	2nd Rev	Comments
15. Isomeric pairs (checked for elution order/correct peak assignment?) • Vinyl Acetate / Isopropyl Ether • 1,2- & 1,3- & 1,4-Dichlorobenzene • Ethylbenzene / m- & p-Xylenes • o-Xylene / Styrene • 1,3,5- & 1,2,4-Trimethylbenzene / Isopropylbenzene / sec-butylbenzene • 2-nitropropane between bromodichloromethane & MIBK • 2- & 4-Chlorotoluene / n-Propylbenzene • MIBK / 2-Hexanone • Methyl Methacrylate / Ethyl Methacrylate • 1,1-Dichloroethene / cis-1,2- & trans-1,2-Dichloroethene • 1,2,3- & 1,2,4-Trichlorobenzene • 1,1-Dichloropropene / cis-1,3- & trans-1,3-Dichloropropene / 1,2,3-Trichloropropane • Chlorobenzene-d5 / 1,1,1,2-Tetrachloroethane • Trichlorofluoromethane / Freon 113 • Hexane / Vinyl Acetate (Chrom: View/Documents/Methods/Isomers)		✓		α	
16. Was the 2nd source initial calibration verification standard (ICV) within required criteria? (624 = QCS method defined/Table5) (8260B = SOP defined) (DoD = ±20%) QAPP specific		+		α	Methyl acetate -20.5%D Acrylonitrile -20.8%D Tetrahydrofuran -23.6%D
17. Was the ICV Target report printed and elution order of all analytes verified? (attach at L1 Review)		+		α	If No, immediate corrective action required
18. If any criteria from items 1-17 were not met, was a NCM generated and supervisor copied?	+			α	
19. Are all files and QC linked and processed correctly?		✓		α	☐ Files linked properly to calibration levels? ☐ All points are in the most recent active calibration event? [Calibration Events - 'Fix ICAL linkage' if needed] ☐ Runs linked to BFB? [QC links] ☐ Checklist & run log scanned, attached & assigned properly?
20. Is the ICAL locked in TALS and Chrom?		✓		α	
21. ICAL Date and Instrument ID verified?		✓		α	

Comments:

2nd Reviewer:

Review Date:

Sequence Name: C:\HPCHEM\1\SEQUENCE\110216am.S

Comment:

Operator: moanm

Data Path: C:\HPCHEM\1\DATA\110216am\

Pre-Seq Cmd:

Post-Seq Cmd:

Test America Denver

Instrument: H

DV-MS-0010 (8260B/624) (Circle)

Purge Volume (20mL/5mL/5g)

(Circle)

Tune Time: 1027

Lims Batch: 349323

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

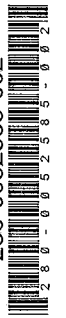
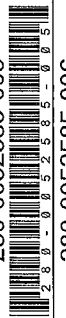
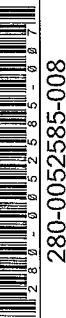
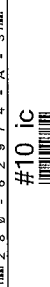
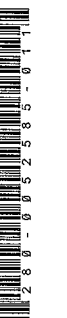
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1 Sample	100	H1070	BFB	bfb
2 Sample	1	H1071	8260	ccv
3 Sample	2	H1072	8260	ccv
4 Sample	3	H1073	8260	ccv
5 Sample	4	H1074	8260	ccv
6 Sample	99	H1075	BFB	bfb
7 Sample	1	H1076	8260	ccv
8 Sample	2	H1077	8260	lcs
9 Sample	3	H1078	8260	blk
10 Sample	4	H1079	8260	ic
11 Sample	5	H1080	8260	ic
12 Sample	6	H1081	8260	ic
13 Sample	98	H1082	BFB	bfb
14 Sample	1	H1083	8260	ccv
15 Sample	2	H1084	8260	ic
16 Sample	3	H1085	8260	ic
17 Sample	4	H1086	8260	ic
18 Sample	5	H1087	8260	ic
19 Sample	6	H1088	8260	icis
20 Sample	7	H1089	8260	ic
21 Sample	8	H1090	8260	ic
22 Sample	9	H1091	8260	blk
23 Sample	10	H1092	8260	icv
24 Sample	11	H1093	8260	lcs
25 Sample	12	H1094	8260	blk
26 Sample	13	H1095	8260	icv
27 Sample	14	H1096	8260	lcs
28 Sample	15	H1097	8260	mb
29 Sample	16	H1098	8260	280-89682-C-15 ph<2 0.1mL
30 Sample	17	H1099	8260	280-90177-A-4 ph<2
31 Sample	18	H1100	8260	280-90177-B-5 ph<2
32 Sample	19	H1101	8260	280-90177-C-6 ph<2 5mL
33 Sample	20	H1102	8260	280-89682-C-15 ph<2 5mL
34 Sample	21	H1103	8260	280-90177-B-4 ph<2 MS
35 Sample	22	H1104	8260	280-90177-B-4 ph<2 MSD
36 Sample	23	H1105	8260	ccvc
37 Sample	24	H1106	8260	blk

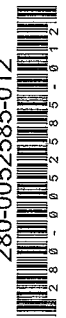
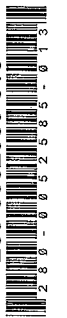
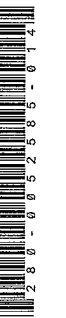
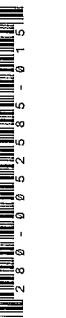
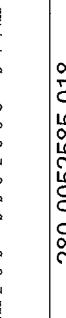
1027
838
11/2/16

TestAmerica Laboratories
Worklist Report

Worklist Name: 110216am
Instrument Name: VMS_H
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\\Denver\\ChromData\\VMS_H\\20161102-52585.b
Upload Directory: \\CorpTALSAPP16\\280-DN-RawData\\Organics\\MS\\VMS_H
Run Reagent: MV-568718-D_00006 Amount Added: 1.000000, Units: uL
Run Reagent: MV-ARCH SS A_00074 Amount Added: 0.780000, Units: uL

Worklist Number: 52585
Chrom Method: AQ_VMSH_8260
Units: mL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052585-001 	# 1 BFB 	MV-BFB_00021	BFB		voaWater	1.000000	uL	1.000000
280-0052585-002 	# 2 CCV 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-SS 2-Cleve_00029	CCV		voaWater	20.00	mL	1.000000
280-0052585-003 	# 3 CCV 	MV-Supp A_00021 MV-568718-D_00006	CCV		voaWater	20.00	mL	1.000000
280-0052585-004 	# 4 LCS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029	LCS		voaWater	20.00	mL	1.000000
280-0052585-005 	# 5 LCSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029	LCSD		voaWater	20.00	mL	1.000000
280-0052585-006 	# 6 MB 		MB		voaWater	20.00	mL	1.000000
280-0052585-007 	# 7 280-62974-A-1 		Client		voaWater	20.00	mL	1.000000
280-0052585-008 	# 8 280-62974-A-2 		Client		voaWater	20.00	mL	1.000000
280-0052585-009 	# 9 280-62974-A-3 		Client		voaWater	20.00	mL	1.000000
280-0052585-010 	#10 ic 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018	IC	1	voaWater	20.00	mL	1.000000
280-0052585-011 	#11 ic 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018 MV-ARCH SS A_00074	IC	2	voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052585-012 	#12 ic 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018 MV-ARCH SS A_00074	IC	3	voaWater	20.00	mL	1.000000
280-0052585-013 	#13 ic 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018 MV-ARCH SS A_00074	IC	4	voaWater	20.00	mL	1.000000
280-0052585-014 	#14 icis 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018 MV-ARCH SS A_00074	ICIS	5	voaWater	20.00	mL	1.000000
280-0052585-015 	#15 ic 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018 MV-ARCH SS A_00074	IC	6	voaWater	20.00	mL	1.000000
280-0052585-016 	#16 ic 	MV-568718-D_00006 MV-Main A_00027 MV-Gas/Ket A_00052 MV-2cleve+AVA_00018 MV-ARCH SS A_00074	IC	7	voaWater	20.00	mL	1.000000
280-0052585-017 	#17 icv 	MV-568718-D_00006 MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029 MV-ARCH SS A_00074	ICV		voaWater	20.00	mL	1.000000
280-0052585-018 	#18 lcs 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00029	LCS		voaWater	20.00	mL	1.000000
280-0052585-019 	#19 mb 		MB		voaWater	20.00	mL	1.000000
280-0052585-020 	#20 280-89682-C-15 		Client		voaWater	0.100000	mL	1.000000
280-0052585-021 	#21 280-90177-A-4 		Client		voaWater	20.00	mL	1.000000
280-0052585-022 	#22 280-90177-B-5 		Client		voaWater	20.00	mL	1.000000
280-0052585-023 	#23 280-90177-C-6 		Client		voaWater	20.00	mL	4.000000
280-0052585-024 	#24 280-90177-B-4 MS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-2cleve+AVA_00018	MS		voaWater	20.00	mL	1.000000
280-0052585-025 	#25 280-90177-B-4 MSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-2cleve+AVA_00018	MSD		voaWater	20.00	mL	1.000000

2-clone, Surrogate only

GCMS Volatile ICAL Data Review Checklist

LIMS Batch Number: 350126	Worklist #: 52785	ICAL Event #: 27509	ICIS/ICV Line #s: - / 16	2 nd Day ICV Line# N/A	Instrument ID: P
2 nd Day Batch/ICV Lines:					
Analyst/1 st Reviewer: Date: 11/07/16	Prep Method (circle): 5030 5035-L 5035-H		Analytical Method (circle): 624 8260B SIM Other		
QC Type (circle): Standard	DoD Q4	DoD Q5	QAPP	Other	
Matrix (circle one): Water	Solid	Circle: 5-mL		20-mL	Meth Ext 5 g

Review Items	NA	Yes	No	2 nd Rev	Comments
A. Tune / Calibration					
1. Did BFB meet tune criteria? If CFCs, did autotune meet SOP criteria?		/		/	
2. Were all standards injected within 12 hours of the BFB? (or 24 hours for 624?)		/		/	
3. Were ≥ 5 levels of each compound and surrogate analyzed? (624 has minimum of four standards)		/		/	
4. Was low level standard at or below RL?		/		/	
5. If calibration points removed, were reasons for removal documented? Did sufficient calibration points remain? (removal from middle of curve not allowed)		/		/	(Other than those stated in SOP)
6. Do the average RFs meet minimum RF requirements? (624 – not method defined) (8260B-SPCCs = Chloromethane, 1,1-Dichloroethane, Bromoform ≥ 0.1 ; Chlorobenzene, 1,1,2,2-Tetrachloroethane ≥ 0.3)		/		/	
7. Did the calibration %RSD meet method requirements? (624: $\leq 35\%$ all cmpds) (8260B: $\leq 30\%$ for CCCs & $\leq 15\%$ for all other cmpds/surrogates)		/		/	
8. Was a linear or quadratic regression fit used for analytes that exceeded the %RSD requirements?		/		/	
9. If regression fit used, is $r^2 \geq 0.990$?		/		/	
10. At least 6 consecutive points used for quadratic curves?	/			N/A	
11. For quadratic – examine plot: Is a tangent's slope to the curve entirely positive or negative and continuous? (does not flatten or recurve within the range of calibration)	/			N/A	
12. For quadratic – evaluate curve fitting errors: Does each point fall within criteria when 'read-back' against the curve? (TA requirement – CA-Q-S-005); (recommended limits $\pm 30\%$ low point & $\pm 20\%$ all other points) (Chrom Report = Details of Calibration per Analyte)	/			N/A	
13. Is the concentration intercept $< RL $ for each cmpd? ("X" intercept in Chrom)		/		/	
Were manual integrations performed correctly and properly documented? (dated, initialed and reason given) 2 nd review of all MIs required	/	.		N/A	
14. Was the high point checked for detector saturation?		/		/	

Review Items	NA	Yes	No	2nd Rev	Comments
15. Isomeric pairs (checked for elution order/correct peak assignment?) - Vinyl Acetate / Isopropyl Ether 1,2- & 1,3- & 1,4-Dichlorobenzene - Ethylbenzene / m- & p-Xylenes - o-Xylene / Styrene 1,3,5- & 1,2,4-Trimethylbenzene / Isopropylbenzene / sec-butylbenzene 2-nitropropane between bromodichloromethane & MIBK 2- & 4-Chlorotoluene / n-Propylbenzene - MIBK / 2-Hexanone - Methyl Methacrylate / Ethyl Methacrylate 1,1-Dichloroethene / cis-1,2- & trans-1,2-Dichloroethene 1,2,3- & 1,2,4-Trichlorobenzene 1,1-Dichloropropene / cis-1,3- & trans-1,3-Dichloropropene / 1,2,3-Trichloropropane - Chlorobenzene-d5 / 1,1,1,2-Tetrachloroethane - Trichlorofluoromethane / Freon 113 - Hexane / Vinyl Acetate (Chrom: View/Documents/Methods/Isomers)					
16. Was the 2nd source initial calibration verification standard (ICV) within required criteria? (624 = QCS method defined/Table5) (8260B = SOP defined) (DoD = $\pm 20\%$) QAPP specific _____					
17. Was the ICV Target report printed and elution order of all analytes verified? (attach at L1 Review)					If No, immediate corrective action required
18. If any criteria from items 1-17 were not met, was a NCM generated and supervisor copied?					
19. Are all files and QC linked and processed correctly?					☐ Files linked properly to calibration levels? ☐ All points are in the most recent active calibration event? [Calibration Events – 'Fix ICAL linkage' if needed] ☐ Runs linked to BFB? [QC links] ☐ Checklist & run log scanned, attached & assigned properly?
20. Is the ICAL locked in TALS and Chrom?					
21. ICAL Date and Instrument ID verified?					

Comments:

2nd Reviewer: *Tan*

Review Date: 11-8-16

Sequence Name: C:\HPCHEM\1\SEQUENCE\110716.S

Comment:

Operator: SEIFERTJ

Data Path: C:\HPCHEM\1\DATA\110716\

Pre-Seq Cmd:

Post-Seq Cmd:

Method Sections To Run On A Barcode Mismatch
(X) Full Method (X) Inject Anyway
() Reprocessing Only () Don't Inject

Test America Denver

Instrument:

V-MS-0010 (8260/624) (Circle)

Purge Volume: (20mL/5mL/5g)

(Circle)

Tune Time: 0828-20.03

350126

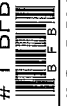
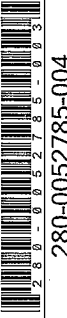
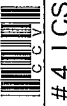
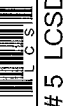
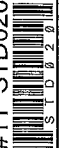
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1 Sample	100	P3690	BFB	BFB
2 Sample	100	P3691	BFB	BFB 0828
3 Sample	10	P3692	8260	CCV
4 Sample	11	P3693	8260	CCV
5 Sample	12	P3694	8260	LCS
6 Sample	13	P3695	8260	MB
7 Sample	14	P3696	8260	LCSD
8 Sample	15	P3697	8260	LCS S
9 Sample	16	P3698	8260	LCSD S
10 Sample	17	P3699	8260	STD010
11 Sample	18	P3700	8260	STD020
12 Sample	19	P3701	8260	STD050
13 Sample	20	P3702	8260	STD10
14 Sample	21	P3703	8260	STD30
15 Sample	22	P3704	8260	STD60
16 Sample	23	P3705	8260	ICV
17 Sample	24	P3706	8260	LCS
18 Sample	25	P3707	8260	MB
19 Sample	26	P3708	8260	280-90092-i-6 PH<2
20 Sample	27	P3709	8260	280-90128-a-2 PH<2
21 Sample	28	P3710	8260	280-90128-c-2 MS PH<2
22 Sample	29	P3711	8260	280-90128-c-2 MSD PH<2
23 Sample	30	P3712	8260	280-90138-i-1 5mL PH=7*
24 Sample	31	P3713	8260	280-90153-c-5 PH<2
25 Sample	32	P3714	8260	280-90153-b-6 PH<2
26 Sample	33	P3715	8260	280-90153-b-7 PH<2
27 Sample	34	P3716	8260	280-90153-d-8 PH<2
28 Sample	35	P3717	8260	280-90153-a-9 PH<2
29 Sample	36	P3718	8260	280-90254-b-11 PH<2
30 Sample	37	P3719	8260	280-90223-e-1 PH<2
31 Sample	38	P3720	8260	280-90223-e-2 PH<2
32 Sample	39	P3721	8260	280-90223-f-3 PH<2
33 Sample	40	P3722	8260	280-90223-d-4 PH<2
34 Sample	41	P3723	8260	280-90223-d-5 PH<2
35 Sample	42	P3724	8260	280-90223-b-6 PH<2
36 Sample	43	P3725	8260	280-90223-d-7 PH<2
37 Sample	44	P3726	8260	280-90223-f-8 PH<2 20.03

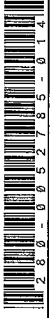
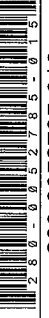
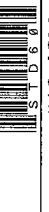
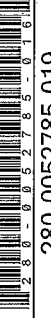
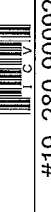
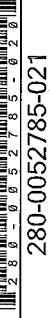
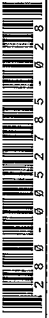
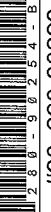
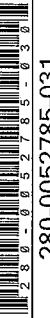
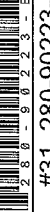
11/8/16

TestAmerica Laboratories
Worklist Report

Worklist Name: 110716
 Instrument Name: VMS_P
 Purge Volume: 20.00
 Analysis Type: VOA
 Batch Directory: \\ChromNAIDenver\ChromData\VMS_P\20161107-52785.b
 Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MMS_VMS_P
 Run Reagent: MV-567649-D_00001
 Run Reagent: MV-ARCH SS A_00074
 Amount Added: 1.000000, Units: uL
 Amount Added: 0.920000, Units: uL

Worklist Number: 52785
 Chrom Method: AQ_VMSP_8260
 Units: mL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052785-001 	#1 BFB 	MV-BFB_00021	BFB		voaWater	1.000000	uL	1.000000
280-0052785-002 	#2 CCV 	MV-Main A_00027 MV-Gas/Ket A_00052 MV-567649-D_00001	CCV		voaWater	20.00	mL	1.000000
280-0052785-003 	#3 CCV 	MV-Supp A_00021 MV-567649-D_00001	CCV		voaWater	20.00	mL	1.000000
280-0052785-004 	#4 LCS 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	LCS		voaWater	20.00	mL	1.000000
280-0052785-005 	#5 LCSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	LCSD		voaWater	20.00	mL	1.000000
280-0052785-017 	#17 LCS 	MV-Supp B_00014	LCS		voaWater	20.00	mL	1.000000
280-0052785-018 	#18 LCSD 	MV-Supp B_00014	LCSD		voaWater	20.00	mL	1.000000
280-0052785-006 	#6 MB 		MB		voaWater	20.00	mL	1.000000
280-0052785-007 	#7 280-62974-A-1 		Client		voaWater	20.00	mL	1.000000
280-0052785-008 	#8 280-62974-A-2 		Client		voaWater	20.00	mL	1.000000
280-0052785-009 	#9 280-62974-A-3 		Client		voaWater	20.00	mL	1.000000
280-0052785-010 	#10 STD010 	MV-2cleve+AVA_00018 MV-ARCH SS A_00074 MV-567649-D_00001	IC	2	voaWater	20.00	mL	1.000000
280-0052785-011 	#11 STD020 	MV-2cleve+AVA_00018 MV-ARCH SS A_00074 MV-567649-D_00001	IC	3	voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052785-012 	#12 STD050 	MV-2cleve+AVA_00018 MV-ARCH SS A_00074 MV-567649-D_00001	IC	4	voaWater	20.00	mL	1.000000
280-0052785-013 	#13 STD10 	MV-2cleve+AVA_00018 MV-ARCH SS A_00074 MV-567649-D_00001	IC	5	voaWater	20.00	mL	1.000000
280-0052785-014 	#14 STD30 	MV-2cleve+AVA_00018 MV-ARCH SS A_00074 MV-567649-D_00001	IC	6	voaWater	20.00	mL	1.000000
280-0052785-015 	#15 STD60 	MV-2cleve+AVA_00018 MV-ARCH SS A_00074 MV-567649-D_00001	IC	7	voaWater	20.00	mL	1.000000
280-0052785-016 	#16 ICV 	MV-2cleve+AVA_00018 MV-ARCH SS A_00074 MV-567649-D_00001	ICV		voaWater	20.00	mL	1.000000
280-0052785-019 	#19 280-90092-I-6 		Client		voaWater	20.00	mL	1.000000
280-0052785-020 	#20 280-90128-A-2 		Client		voaWater	20.00	mL	1.000000
280-0052785-021 	#21 280-90128-C-2 MS 	MV-SS 2-Cleve_00030 MV-Gas/Ket B_00030 MV-Main B_00016	MS		voaWater	20.00	mL	1.000000
280-0052785-022 	#22 280-90128-C-2 MSD 	MV-Main B_00016 MV-Gas/Ket B_00030 MV-SS 2-Cleve_00030	MSD		voaWater	20.00	mL	1.000000
280-0052785-023 	#23 280-90138-I-1 		Client		voaWater	5.000000	mL	1.000000
280-0052785-024 	#24 280-90153-C-5 		Client		voaWater	20.00	mL	1.000000
280-0052785-025 	#25 280-90153-B-6 		Client		voaWater	20.00	mL	1.000000
280-0052785-026 	#26 280-90153-B-7 		Client		voaWater	20.00	mL	1.000000
280-0052785-027 	#27 280-90153-D-8 		Client		voaWater	20.00	mL	1.000000
280-0052785-028 	#28 280-90153-A-9 		Client		voaWater	20.00	mL	1.000000
280-0052785-029 	#29 280-90254-B-11 		Client		voaWater	20.00	mL	1.000000
280-0052785-030 	#30 280-90223-E-1 		Client		voaWater	20.00	mL	1.000000
280-0052785-031 	#31 280-90223-E-2 		Client		voaWater	20.00	mL	1.000000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0052785-032 	#32 280-90223-F-3 		Client		voaWater	20.00	mL	1.000000
280-0052785-033 	#33 280-90223-D-4 		Client		voaWater	20.00	mL	1.000000
280-0052785-034 	#34 280-90223-D-5 		Client		voaWater	20.00	mL	1.000000
280-0052785-035 	#35 280-90223-B-6 		Client		voaWater	20.00	mL	1.000000
280-0052785-036 	#36 280-90223-D-7 		Client		voaWater	20.00	mL	1.000000
280-0052785-037 	#37 280-90223-F-8 		Client		voaWater	20.00	mL	1.000000
280-0052785-038 	#38 Samp 38 		Client		voaWater	20.00	mL	1.000000

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-90232-1

SDG No.: _____

Project: Ravenna, OH, LL5

Client Sample ID
LL5mw-002-102616-GW
LL5mw-006-102616-GW

Lab Sample ID
280-90232-1
280-90232-2

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL5mw-002-102616-GW

Lab Sample ID: 280-90232-1

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG ID.:

Matrix: Water

Date Sampled: 10/26/2016 10:35

Reporting Basis: WET

Date Received: 10/28/2016 09:55

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	2.0	10	5.0	2.0	ug/L	J		1	9012B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LL5mw-006-102616-GW Lab Sample ID: 280-90232-2
Lab Name: TestAmerica Denver Job No.: 280-90232-1
SDG ID.:
Matrix: Water Date Sampled: 10/27/2016 15:11
Reporting Basis: WET Date Received: 10/28/2016 09:55

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	2.8	10	5.0	2.0	ug/L	J		1	9012B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Analyst: JML Batch Start Date: 11/08/2016
 Reporting Units: mg/L Analytical Batch No.: 350450

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	12:06	Cyanide, Total	0.0968	0.100	97	90-110		CN ICV Daily_00938
15	ICB	12:08	Cyanide, Total	0.0050				U	
44	CCV	12:52	Cyanide, Total	0.201	0.200	101	90-110		CN CAL 1 ppm_01174
45	CCB	12:53	Cyanide, Total	0.0050				U	
59	CCV	13:14	Cyanide, Total	0.205	0.200	103	90-110		CN CAL 1 ppm_01174
60	CCB	13:16	Cyanide, Total	0.0050				U	
74	CCV	13:37	Cyanide, Total	0.204	0.200	102	90-110		CN CAL 1 ppm_01174
75	CCB	13:38	Cyanide, Total	0.0050				U	

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

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Analyst: JML Batch Start Date: 11/09/2016
 Reporting Units: mg/L Analytical Batch No.: 350638

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	11:51	Cyanide, Total	0.0973	0.100	97	90-110		CN ICV Daily_00939
15	ICB	11:52	Cyanide, Total	0.0050				U	
29	CCV	12:13	Cyanide, Total	0.200	0.200	100	90-110		CN CAL 1 ppm_01175
30	CCB	12:15	Cyanide, Total	0.0050				U	
44	CCV	12:36	Cyanide, Total	0.203	0.200	102	90-110		CN CAL 1 ppm_01175
45	CCB	12:38	Cyanide, Total	0.0050				U	
59	CCV	12:59	Cyanide, Total	0.203	0.200	102	90-110		CN CAL 1 ppm_01175
60	CCB	13:00	Cyanide, Total	0.0050				U	

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

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 350450 Date: 11/08/2016 13:01	Prep Batch: 350408 Date: 11/08/2016 09:41						
9012B	MB 280-350408/4-A	Cyanide, Total	3.09	J	ug/L	10	1
Batch ID: 350638 Date: 11/09/2016 12:20	Prep Batch: 350530 Date: 11/09/2016 06:37						
9012B	MB 280-350530/4-A	Cyanide, Total	5.0	U	ug/L	10	1

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 350450 Date: 11/08/2016 12:59 Prep Batch: 350408 Date: 11/08/2016 09:41											
LCS Source: CN ICV Int_00406											
9012B	LCS 280-350408/3-A	Cyanide, Total	97.8		ug/L	100	98	83-116			
Batch ID: 350638 Date: 11/09/2016 12:18 Prep Batch: 350530 Date: 11/09/2016 06:37											
LCS Source: CN ICV Int_00407											
9012B	LCS 280-350530/3-A	Cyanide, Total	96.8		ug/L	100	97	83-116			

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

FORM VIIA-IN

7A-IN
LOW LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 350450 Date: 11/08/2016 12:58 Prep Batch: 350408 Date: 11/08/2016 09:41											
LCS Source: CN 10ppm_00227											
9012B	LLCS 280-350408/2-A	Cyanide, Total	103		ug/L	100	103	44-167			
Batch ID: 350638 Date: 11/09/2016 12:09 Prep Batch: 350530 Date: 11/09/2016 06:37											
LCS Source: CN 10ppm_00228											
9012B	LLCS 280-350530/2-A	Cyanide, Total	98.0		ug/L	100	98	44-167			

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

FORM VIIA-IN

7A-IN
HIGH LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 350450 Date: 11/08/2016 12:56 Prep Batch: 350408 Date: 11/08/2016 09:41 LCS Source: CN 10ppm_00227											
9012B	HLCS 280-350408/1-A	Cyanide, Total	401		ug/L	400	100	90-110			
Batch ID: 350638 Date: 11/09/2016 12:07 Prep Batch: 350530 Date: 11/09/2016 06:37 LCS Source: CN 10ppm_00228											
9012B	HLCS 280-350530/1-A	Cyanide, Total	383		ug/L	400	96	90-110			

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

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver

Job Number: 280-90232-1

SDG Number: _____

Matrix: Water

Instrument ID: WC_Alps 1

Method: 9012B

DL Date: 02/16/2014 00:00

Prep Method: 9012B

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-90232-1
SDG Number: _____
Matrix: Water Instrument ID: WC_Alps 1
Method: 9012B XMDL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.002

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
HLCS 280-350408/1-A	11/08/2016 09:41	350408		50	50
LLCS 280-350408/2-A	11/08/2016 09:41	350408		50	50
LCS 280-350408/3-A	11/08/2016 09:41	350408		50	50
MB 280-350408/4-A	11/08/2016 09:41	350408		50	50
280-90232-1	11/08/2016 09:41	350408		50	50

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
HLCS 280-350530/1-A	11/09/2016 06:37	350530		50	50
LLCS 280-350530/2-A	11/09/2016 06:37	350530		50	50
LCS 280-350530/3-A	11/09/2016 06:37	350530		50	50
MB 280-350530/4-A	11/09/2016 06:37	350530		50	50
280-90232-2	11/09/2016 06:37	350530		50	50

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Instrument ID: WC_Alps 1 Analysis Method: 9012B

Start Date: 11/08/2016 11:47 End Date: 11/08/2016 13:40

Lab Sample Id	D/F	T y p e	Time	Analytes																									
				C N																									
ZZZZZZ			11:47																										
ZZZZZZ			11:48																										
ZZZZZZ			11:50																										
ZZZZZZ			11:51																										
IC 280-350450/5			11:53	X																									
IC 280-350450/6			11:54	X																									
IC 280-350450/7			11:56	X																									
IC 280-350450/8			11:57	X																									
IC 280-350450/9			11:59	X																									
IC 280-350450/10			12:00	X																									
IC 280-350450/11			12:02	X																									
ZZZZZZ			12:03																										
ZZZZZZ			12:05																										
ICV 280-350450/14	1		12:06	X																									
ICB 280-350450/15	1		12:08	X																									
ZZZZZZ			12:09																										
ZZZZZZ			12:11																										
ZZZZZZ			12:12																										
ZZZZZZ			12:14																										
ZZZZZZ			12:15																										
ZZZZZZ			12:17																										
ZZZZZZ			12:18																										
ZZZZZZ			12:20																										
ZZZZZZ			12:22																										
ZZZZZZ			12:23																										
ZZZZZZ			12:25																										
ZZZZZZ			12:26																										
ZZZZZZ			12:28																										
CCV 280-350450/29			12:29																										
CCB 280-350450/30			12:31																										
ZZZZZZ			12:32																										
ZZZZZZ			12:34																										
ZZZZZZ			12:35																										
ZZZZZZ			12:37																										
ZZZZZZ			12:38																										
ZZZZZZ			12:40																										
ZZZZZZ			12:41																										
ZZZZZZ			12:43																										
ZZZZZZ			12:44																										
ZZZZZZ			12:46																										
ZZZZZZ			12:47																										
ZZZZZZ			12:49																										

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Instrument ID: WC_Alp 1 Analysis Method: 9012B
 Start Date: 11/08/2016 11:47 End Date: 11/08/2016 13:40

Lab Sample Id	D/F	T y p e	Time	Analytes																									
				C N																									
ZZZZZZ			12:50																										
CCV 280-350450/44	1		12:52	X																									
CCB 280-350450/45	1		12:53	X																									
ZZZZZZ			12:55																										
HLCS 280-350408/1-A	2	T	12:56	X																									
LLCS 280-350408/2-A	1	T	12:58	X																									
LCS 280-350408/3-A	1	T	12:59	X																									
MB 280-350408/4-A	1	T	13:01	X																									
ZZZZZZ			13:02																										
ZZZZZZ			13:04																										
ZZZZZZ			13:05																										
ZZZZZZ			13:07																										
ZZZZZZ			13:08																										
ZZZZZZ			13:10																										
ZZZZZZ			13:11																										
ZZZZZZ			13:13																										
CCV 280-350450/59	1		13:14	X																									
CCB 280-350450/60	1		13:16	X																									
ZZZZZZ			13:17																										
ZZZZZZ			13:19																										
ZZZZZZ			13:20																										
ZZZZZZ			13:22																										
ZZZZZZ			13:23																										
ZZZZZZ			13:25																										
ZZZZZZ			13:26																										
280-90232-1	1	T	13:28	X																									
ZZZZZZ			13:29																										
ZZZZZZ			13:31																										
ZZZZZZ			13:32																										
ZZZZZZ			13:34																										
ZZZZZZ			13:35																										
CCV 280-350450/74	1		13:37	X																									
CCB 280-350450/75	1		13:38	X																									
ZZZZZZ			13:40																										

Prep Types: _____
 T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver

Job No.: 280-90232-1

SDG No.: _____

Instrument ID: WC_Alp 1

Analysis Method: 9012B

Start Date: 11/09/2016 11:31

End Date: 11/09/2016 13:18

Lab Sample Id	D/F	T y p e	Time	Analytes																									
				C N																									
ZZZZZZ			11:31																										
ZZZZZZ			11:33																										
ZZZZZZ			11:34																										
ZZZZZZ			11:36																										
IC 280-350638/5			11:37	X																									
IC 280-350638/6			11:39	X																									
IC 280-350638/7			11:40	X																									
IC 280-350638/8			11:42	X																									
IC 280-350638/9			11:43	X																									
IC 280-350638/10			11:45	X																									
IC 280-350638/11			11:46	X																									
ZZZZZZ			11:48																										
ZZZZZZ			11:49																										
ICV 280-350638/14	1		11:51	X																									
ICB 280-350638/15	1		11:52	X																									
ZZZZZZ			11:54																										
ZZZZZZ			11:55																										
ZZZZZZ			11:57																										
ZZZZZZ			11:58																										
ZZZZZZ			12:00																										
ZZZZZZ			12:01																										
ZZZZZZ			12:03																										
ZZZZZZ			12:04																										
ZZZZZZ			12:06																										
HLCS 280-350530/1-A	2	T	12:07	X																									
LLCS 280-350530/2-A	1	T	12:09	X																									
ZZZZZZ			12:10																										
ZZZZZZ			12:12																										
CCV 280-350638/29	1		12:13	X																									
CCB 280-350638/30	1		12:15	X																									
ZZZZZZ			12:16																										
LCS 280-350530/3-A	1	T	12:18	X																									
MB 280-350530/4-A	1	T	12:20	X																									
ZZZZZZ			12:21																										
ZZZZZZ			12:23																										
ZZZZZZ			12:24																										
ZZZZZZ			12:26																										
ZZZZZZ			12:27																										
ZZZZZZ			12:29																										
ZZZZZZ			12:30																										
ZZZZZZ			12:32																										
ZZZZZZ			12:33																										

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-90232-1
 SDG No.: _____
 Instrument ID: WC_Alp 1 Analysis Method: 9012B
 Start Date: 11/09/2016 11:31 End Date: 11/09/2016 13:18

Lab Sample Id	D/F	T y p e	Time	Analytes																									
				C N																									
ZZZZZZ			12:35																										
CCV 280-350638/44	1		12:36	X																									
CCB 280-350638/45	1		12:38	X																									
ZZZZZZ			12:39																										
ZZZZZZ			12:41																										
280-90232-2	1	T	12:42	X																									
ZZZZZZ			12:44																										
ZZZZZZ			12:45																										
ZZZZZZ			12:47																										
ZZZZZZ			12:48																										
ZZZZZZ			12:50																										
ZZZZZZ			12:51																										
ZZZZZZ			12:53																										
ZZZZZZ			12:54																										
ZZZZZZ			12:56																										
ZZZZZZ			12:57																										
CCV 280-350638/59	1		12:59	X																									
CCB 280-350638/60	1		13:00	X																									
ZZZZZZ			13:02																										
ZZZZZZ			13:03																										
ZZZZZZ			13:05																										
ZZZZZZ			13:06																										
ZZZZZZ			13:08																										
ZZZZZZ			13:09																										
ZZZZZZ			13:11																										
ZZZZZZ			13:12																										
ZZZZZZ			13:14																										
CCV 280-350638/70			13:15																										
CCB 280-350638/71			13:17																										
ZZZZZZ			13:18																										

Prep Types: _____
 T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Batch Number: 350408 Batch Start Date: 11/08/16 09:40 Batch Analyst: Lehman, Jeffrey MBatch Method: 9012B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	DistillpHCheck	SulfideCheck	ChlorineCheck	CN 10ppm 00227
HLCS 280-350408/1		9012B, 9012B		50 mL	50 mL	>12	N	N	2 mL
LLCS 280-350408/2		9012B, 9012B		50 mL	50 mL	>12	N	N	0.5 mL
LCS 280-350408/3		9012B, 9012B		50 mL	50 mL	>12	N	N	
MB 280-350408/4		9012B, 9012B		50 mL	50 mL	>12	N	N	
280-90232-C-1	LL5mw-002-102616 -GW	9012B, 9012B	T	50 mL	50 mL	>12	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00406					
HLCS 280-350408/1		9012B, 9012B							
LLCS 280-350408/2		9012B, 9012B							
LCS 280-350408/3		9012B, 9012B		0.5 mL					
MB 280-350408/4		9012B, 9012B							
280-90232-C-1	LL5mw-002-102616 -GW	9012B, 9012B	T						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

9012B

Page 1 of 1

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Batch Number: 350450 Batch Start Date: 11/08/16 11:47 Batch Analyst: Lehman, Jeffrey MBatch Method: 9012B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01174	CN ICV Daily 00938		
ICV 280-350450/14		9012B		50 mL	50 mL		50 mL		
ICB 280-350450/15		9012B		50 mL	50 mL				
CCV 280-350450/44		9012B		50 mL	50 mL	10 mL			
CCB 280-350450/45		9012B		50 mL	50 mL				
HLCS 280-350408/1-A		9012B		50 mL	50 mL				
LLCS 280-350408/2-A		9012B		50 mL	50 mL				
LCS 280-350408/3-A		9012B		50 mL	50 mL				
MB 280-350408/4-A		9012B		50 mL	50 mL				
CCV 280-350450/59		9012B		50 mL	50 mL	10 mL			
CCB 280-350450/60		9012B		50 mL	50 mL				
280-90232-C-1-A	LL5mw-002-102616 -GW	9012B	T	50 mL	50 mL				
CCV 280-350450/74		9012B		50 mL	50 mL	10 mL			
CCB 280-350450/75		9012B		50 mL	50 mL				

Batch Notes	
Buffer Reagent ID Number	CN Buffer_00086
Chloramine-T ID	CN Chloro-T_00713
Pipette ID	WC 5000ELJ WC 1000NXN
Pyridine-Barbituric Acid ID	CN Pyr/Barb_00146

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

9012B

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GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Batch Number: 350530 Batch Start Date: 11/09/16 06:37 Batch Analyst: Lehman, Jeffrey MBatch Method: 9012B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	DistillpHCheck	SulfideCheck	ChlorineCheck	CN 10ppm 00228
HLCS 280-350530/1		9012B, 9012B		50 mL	50 mL	>12	N	N	2 mL
LLCS 280-350530/2		9012B, 9012B		50 mL	50 mL	>12	N	N	0.5 mL
LCS 280-350530/3		9012B, 9012B		50 mL	50 mL	>12	N	N	
MB 280-350530/4		9012B, 9012B		50 mL	50 mL	>12	N	N	
280-90232-C-2	LL5mw-006-102616 -GW	9012B, 9012B	T	50 mL	50 mL	>12	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00407					
HLCS 280-350530/1		9012B, 9012B							
LLCS 280-350530/2		9012B, 9012B							
LCS 280-350530/3		9012B, 9012B		0.5 mL					
MB 280-350530/4		9012B, 9012B							
280-90232-C-2	LL5mw-006-102616 -GW	9012B, 9012B	T						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

9012B

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GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-90232-1

SDG No.: _____

Batch Number: 350638 Batch Start Date: 11/09/16 11:31 Batch Analyst: Lehman, Jeffrey MBatch Method: 9012B Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01175	CN ICV Daily 00939		
ICV 280-350638/14		9012B		50 mL	50 mL		50 mL		
ICB 280-350638/15		9012B		50 mL	50 mL				
HLCS 280-350530/1-A		9012B		50 mL	50 mL				
LLCS 280-350530/2-A		9012B		50 mL	50 mL				
CCV 280-350638/29		9012B		50 mL	50 mL	10 mL			
CCB 280-350638/30		9012B		50 mL	50 mL				
LCS 280-350530/3-A		9012B		50 mL	50 mL				
MB 280-350530/4-A		9012B		50 mL	50 mL				
CCV 280-350638/44		9012B		50 mL	50 mL	10 mL			
CCB 280-350638/45		9012B		50 mL	50 mL				
280-90232-C-2-A	LL5mw-006-102616 -GW	9012B	T	50 mL	50 mL				
CCV 280-350638/59		9012B		50 mL	50 mL	10 mL			
CCB 280-350638/60		9012B		50 mL	50 mL				

Batch Notes	
Buffer Reagent ID Number	CN Buffer_00087
Chloramine-T ID	CN Chloro-T_00713
Pipette ID	WC 5000ELJ WC 1000NXN
Pyridine-Barbituric Acid ID	CN Pyr/Barb_00147

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

9012B

Page 1 of 1

Run Results Report

Facility Name
Facility Location
Department
Operator Name JML
Operator ID JML
Platform FS III/IV/3100
Software Rev Code 222
Data system ID 57

Result path C:\FLOW_4\C110816A.RST
Sample table path C:\FLOW_4\c110816a.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 08-Nov-16
Time acquired 13:45

----- Cyanide, Total -----					
Date	Time	Cup	Name	Response	Calc [ppb] Flags
08-Nov-16	11:47	107	Sync	332530	390.624
08-Nov-16	11:48	0	Carryover	434	0.490
08-Nov-16	11:50	0	Carryover	62	0.053
08-Nov-16	11:51	0	Baseline	0	-0.020 BL
08-Nov-16	11:53	101	CAL 0.00 ppb	449	0.508
08-Nov-16	11:54	102	CAL 10.0 ppb	8200	9.614
08-Nov-16	11:56	103	CAL 20.0 ppb	16419	19.269
08-Nov-16	11:57	104	CAL 50.0 ppb	42224	49.583
08-Nov-16	11:59	105	CAL 100 ppb	85597	100.536
08-Nov-16	12:00	106	Cal 200 ppb	171160	201.052
08-Nov-16	12:02	107	Cal 400 ppb	340033	399.438
08-Nov-16	12:03	0	BLK	108	0.107
08-Nov-16	12:05	0	Baseline	0	-0.020 BL
08-Nov-16	12:06	108	ICV 100 ppb	82443	96.831
08-Nov-16	12:08	0	ICB	114	0.114
08-Nov-16	12:09	0	Baseline	0	-0.020 BL
08-Nov-16	12:11	113	hlcs 280-350354/1-a	167237	392.887
08-Nov-16	12:12	114	llcs 280-350354/2-a	81847	96.131
08-Nov-16	12:14	115	lcs 280-350354/3-a	83284	97.819
08-Nov-16	12:15	116	lcsd 280-350354/4-a	83971	98.626
08-Nov-16	12:17	117	mb 280-350354/5-a	3630	4.244
08-Nov-16	12:18	118	280-90121-p-2-a	4567	5.346
08-Nov-16	12:20	119	280-90121-p-2-b ms	75375	88.528
08-Nov-16	12:22	120	280-90121-p-2-c msd	77902	91.496
08-Nov-16	12:23	121	280-90121-p-3-a	7418	8.695
08-Nov-16	12:25	122	280-90121-p-4-a	4649	5.441
08-Nov-16	12:26	0	BLK	34	0.020
08-Nov-16	12:28	0	baseline	0	-0.020 BL
08-Nov-16	12:29	109	CCV 200PPB	174020	204.412
08-Nov-16	12:31	0	CCB	-32	-0.057 LO
08-Nov-16	12:32	0	Baseline	0	-0.020 BL
08-Nov-16	12:34	123	280-90121-p-5-a	2017	2.350
08-Nov-16	12:35	124	280-90121-p-6-a	8551	10.025
08-Nov-16	12:37	125	280-90121-c-7-a	5686	6.660
08-Nov-16	12:38	126	280-90121-p-9-a	3296	3.853
08-Nov-16	12:40	127	280-90139-o-1-a	6493	7.608
08-Nov-16	12:41	128	280-90139-o-2-a	3000	3.505
08-Nov-16	12:43	129	280-90139-o-3-a	6518	7.637
08-Nov-16	12:44	130	280-90139-o-4-a	5117	5.992
08-Nov-16	12:46	131	280-90139-o-4-b ms	72541	85.198
08-Nov-16	12:47	132	280-90139-o-4-c msd	90856	106.714
08-Nov-16	12:49	0	BLK	-30	-0.055 LO
08-Nov-16	12:50	0	baseline	0	-0.020 BL
08-Nov-16	12:52	109	CCV 200PPB	171443	201.385
08-Nov-16	12:53	0	CCB	-18	-0.041 LO
08-Nov-16	12:55	0	Baseline	0	-0.020 BL

Result pathC:\FLOW_4\C110816A.RST
Sample table pathC:\FLOW_4\c110816a.tbl
Method pathC:\FLOW_4\cyanide.mth
Date acquired08-Nov-16
Time acquired13:45

----- Cyanide, Total -----						
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
08-Nov-16	12:56	133	hlcs 280-350408/1-a	170895	401.483	
08-Nov-16	12:58	134	llcs 280-350408/2-a	87391	102.644	
08-Nov-16	12:59	135	lcs 280-350408/3-a	83227	97.752	
08-Nov-16	13:01	136	mb 280-350408/4-a	2649	3.092	
08-Nov-16	13:02	137	280-90135-o-1-a	2492	2.908	
08-Nov-16	13:04	138	280-90135-o-1-b ms	87928	103.275	
08-Nov-16	13:05	139	280-90135-o-1-c msd	81914	96.210	
08-Nov-16	13:07	140	280-90207-e-1-a	15739	18.470	
08-Nov-16	13:08	141	280-90207-e-2-a	19503	22.892	
08-Nov-16	13:10	142	280-90207-e-3-a	3110	3.634	
08-Nov-16	13:11	0	BLK	68	0.060	
08-Nov-16	13:13	0	baseline	0	-0.020	BL
08-Nov-16	13:14	109	CCV 200PPB	174704	205.215	
08-Nov-16	13:16	0	CCB	-49	-0.078	LO
08-Nov-16	13:17	0	Baseline	0	-0.020	BL
08-Nov-16	13:19	143	280-90207-e-5-a	2410	2.811	
08-Nov-16	13:20	144	280-90207-e-6-a	2006	2.337	
08-Nov-16	13:22	145	280-90207-e-7-a	4645	5.437	
08-Nov-16	13:23	146	280-90207-e-8-a	15814	18.558	
08-Nov-16	13:25	147	280-90212-j-1-a	4800	5.619	
08-Nov-16	13:26	148	280-90250-m-1-a	3135	3.663	
08-Nov-16	13:28	149	280-90232-c-1-a	1717	1.997	
08-Nov-16	13:29	150	280-90227-e-1-a	2263	2.639	
08-Nov-16	13:31	151	280-90227-e-1-b ms	87243	102.470	
08-Nov-16	13:32	152	280-90227-e-1-c msd	88425	103.858	
08-Nov-16	13:34	0	BLK	31	0.016	
08-Nov-16	13:35	0	baseline	0	-0.020	BL
08-Nov-16	13:37	109	CCV 200PPB	173643	203.970	
08-Nov-16	13:38	0	CCB	6	-0.013	LO
08-Nov-16	13:40	0	Baseline	0	-0.020	BL

File name: C:\FLOW_4\C110816A.RST

Date: 08-Nov-16

Operator: JML

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
1	107	Sync	1	SYNC		1	1	332530	390.623749
2	0	Carryover	1	CO		1	1	434	0.489648
3	0	Carryover	2	CO		1	1	62	0.052869
B	0	Baseline	1	RB		1	1	0	-0.019847 BL
5	101	CAL 0.00 ppb	1	C		1	1	449	0.508094
6	102	CAL 10.0 ppb	1	C		1	1	8200	9.613715
7	103	CAL 20.0 ppb	1	C		1	1	16419	19.269136
8	104	CAL 50.0 ppb	1	C		1	1	42224	49.582741
9	105	CAL 100 ppb	1	C		1	1	85597	100.535759
10	106	Cal 200 ppb	1	C		1	1	171160	201.052292
11	107	Cal 400 ppb	1	C		1	1	340033	399.438293
12	0	BLK	1	BLNK		1	1	108	0.107052
B	0	Baseline	1	RB		1	1	0	-0.019847 BL
14	108	ICV 100 ppb	1	CCV		1	1	82443	96.830933
15	0	ICB	1	U		1	1	114	0.114135
B	0	Baseline	1	RB		1	1	0	-0.019847 BL
17	113	hlcs 280-350354/1-a	1	U		2	1	167237	392.887329
18	114	llcs 280-350354/2-a	1	U		1	1	81847	96.130600
19	115	lcs 280-350354/3-a	1	U		1	1	83284	97.819054
20	116	lcsd 280-350354/4-a	1	U		1	1	83971	98.625809
21	117	mb 280-350354/5-a	1	U		1	1	3630	4.244309
22	118	280-90121-p-2-a	1	U		1	1	4567	5.345637
23	119	280-90121-p-2-b	ms	1	U	1	1	75375	88.527748
24	120	280-90121-p-2-c	msd	1	U	1	1	77902	91.496094
25	121	280-90121-p-3-a	1	U		1	1	7418	8.694963
26	122	280-90121-p-4-a	1	U		1	1	4649	5.441318
27	0	BLK	1	BLNK		1	1	34	0.019768
B	0	baseline	1	RB		1	1	0	-0.019847 BL
29	109	CCV 200PPB	1	CCV		1	1	174020	204.412308
30	0	CCB	1	U		1	1	-32	-0.056987 LO
B	0	Baseline	1	RB		1	1	0	-0.019847 BL
32	123	280-90121-p-5-a	1	U		1	1	2017	2.349922
33	124	280-90121-p-6-a	1	U		1	1	8551	10.025448
34	125	280-90121-c-7-a	1	U		1	1	5686	6.660331
35	126	280-90121-p-9-a	1	U		1	1	3296	3.852612
36	127	280-90139-o-1-a	1	U		1	1	6493	7.607926
37	128	280-90139-o-2-a	1	U		1	1	3000	3.504936
38	129	280-90139-o-3-a	1	U		1	1	6518	7.637301
39	130	280-90139-o-4-a	1	U		1	1	5117	5.991988
40	131	280-90139-o-4-b	ms	1	U	1	1	72541	85.198395
41	132	280-90139-o-4-c	msd	1	U	1	1	90856	106.714081
42	0	BLK	1	BLNK		1	1	-30	-0.055322 LO
B	0	baseline	1	RB		1	1	0	-0.019847 BL
44	109	CCV 200PPB	1	CCV		1	1	171443	201.385498
45	0	CCB	1	U		1	1	-18	-0.040597 LO
B	0	Baseline	1	RB		1	1	0	-0.019847 BL
47	133	hlcs 280-350408/1-a	1	U		2	1	170895	401.482788
48	134	llcs 280-350408/2-a	1	U		1	1	87391	102.644196
49	135	lcs 280-350408/3-a	1	U		1	1	83227	97.752281
50	136	mb 280-350408/4-a	1	U		1	1	2649	3.091588
51	137	280-90135-o-1-a	1	U		1	1	2492	2.907964
52	138	280-90135-o-1-b	ms	1	U	1	1	87928	103.275024
53	139	280-90135-o-1-c	msd	1	U	1	1	81914	96.209908
54	140	280-90207-e-1-a	1	U		1	1	15739	18.470001
55	141	280-90207-e-2-a	1	U		1	1	19503	22.892017
56	142	280-90207-e-3-a	1	U		1	1	3110	3.633850
57	0	BLK	1	BLNK		1	1	68	0.059547
B	0	baseline	1	RB		1	1	0	-0.019847 BL
59	109	CCV 200PPB	1	CCV		1	1	174704	205.215286
60	0	CCB	1	U		1	1	-49	-0.077800 LO
B	0	Baseline	1	RB		1	1	0	-0.019847 BL
62	143	280-90207-e-5-a	1	U		1	1	2410	2.810834
63	144	280-90207-e-6-a	1	U		1	1	2006	2.337024
64	145	280-90207-e-7-a	1	U		1	1	4645	5.437217
65	146	280-90207-e-8-a	1	U		1	1	15814	18.557549
66	147	280-90212-j-1-a	1	U		1	1	4800	5.619357
67	148	280-90250-m-1-a	1	U		1	1	3135	3.663407
68	149	280-90232-c-1-a	1	U		1	1	1717	1.996992
69	150	280-90227-e-1-a	1	U		1	1	2263	2.638820
70	151	280-90227-e-1-b	ms	1	U	1	1	87243	102.469887

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
71	152	280-90227-e-1-c	msd	1	U	1	1	88425	103.858025
72	0	BLK	1	BLNK		1	1	31	0.016336
B	0	baseline	1	RB		1	1	0	-0.019847 BL
74	109	CCV 200PPB	1	CCV		1	1	173643	203.969666
75	0	CCB	1	U		1	1	6	-0.012516 LO
B	0	Baseline	1	RB		1	1	0	-0.019847 BL

File name: C:\FLOW_4\C110816A.RST

Date: 08-Nov-16

Operator: JML

* Name	Conc	Height
* CAL 0.00 ppb	0.000000	449.402618
* CAL 10.0 ppb	10.000000	8200.434570
* CAL 20.0 ppb	20.000000	16419.478516
* CAL 50.0 ppb	50.000000	42223.507812
* CAL 100 ppb	100.000000	85596.554688
* Cal 200 ppb	200.000000	171159.843750
* Cal 400 ppb	400.000000	340033.156250

Calib Coef:

y=bx+a

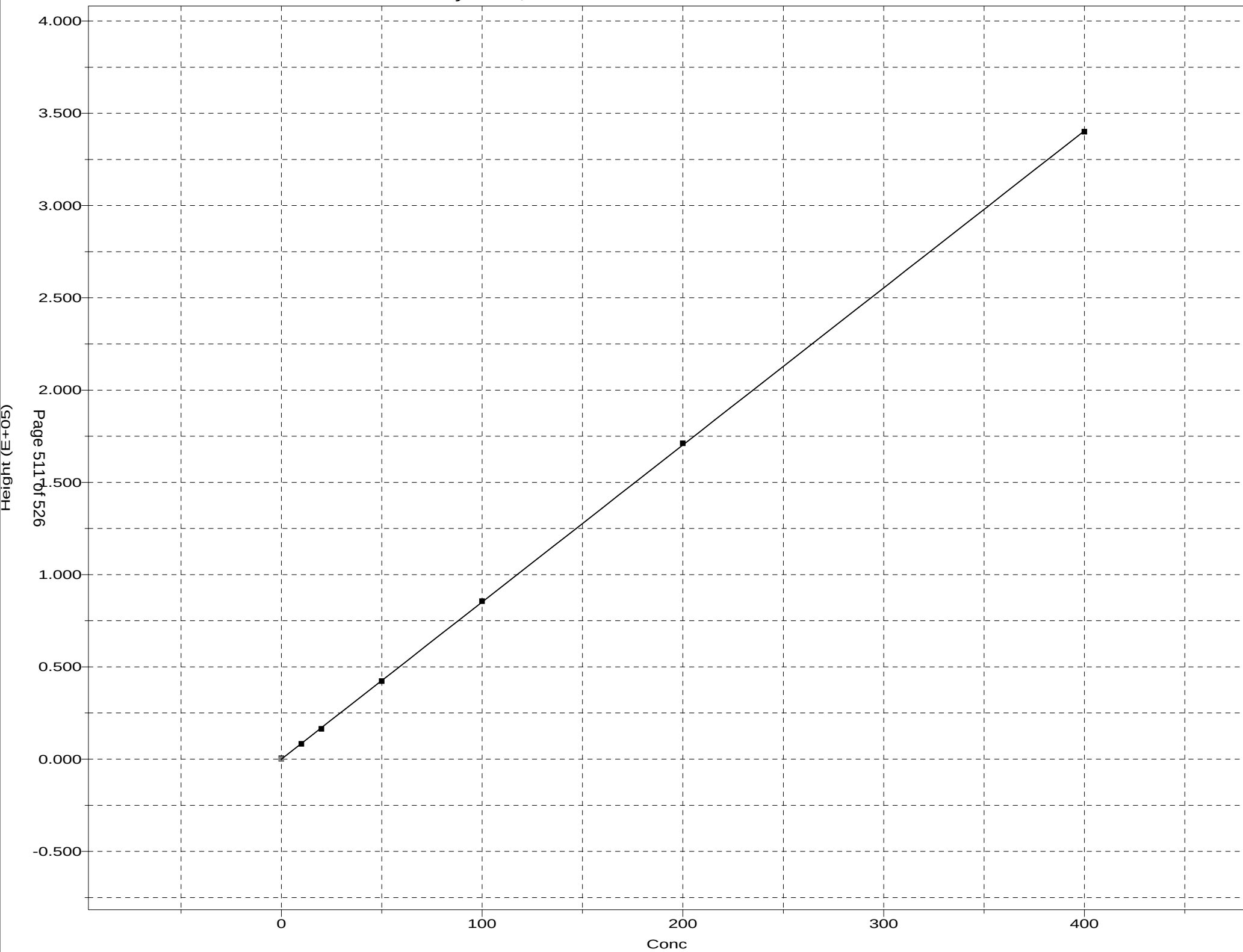
a: (intercept) 1.6894e+01

b: 8.5124e+02

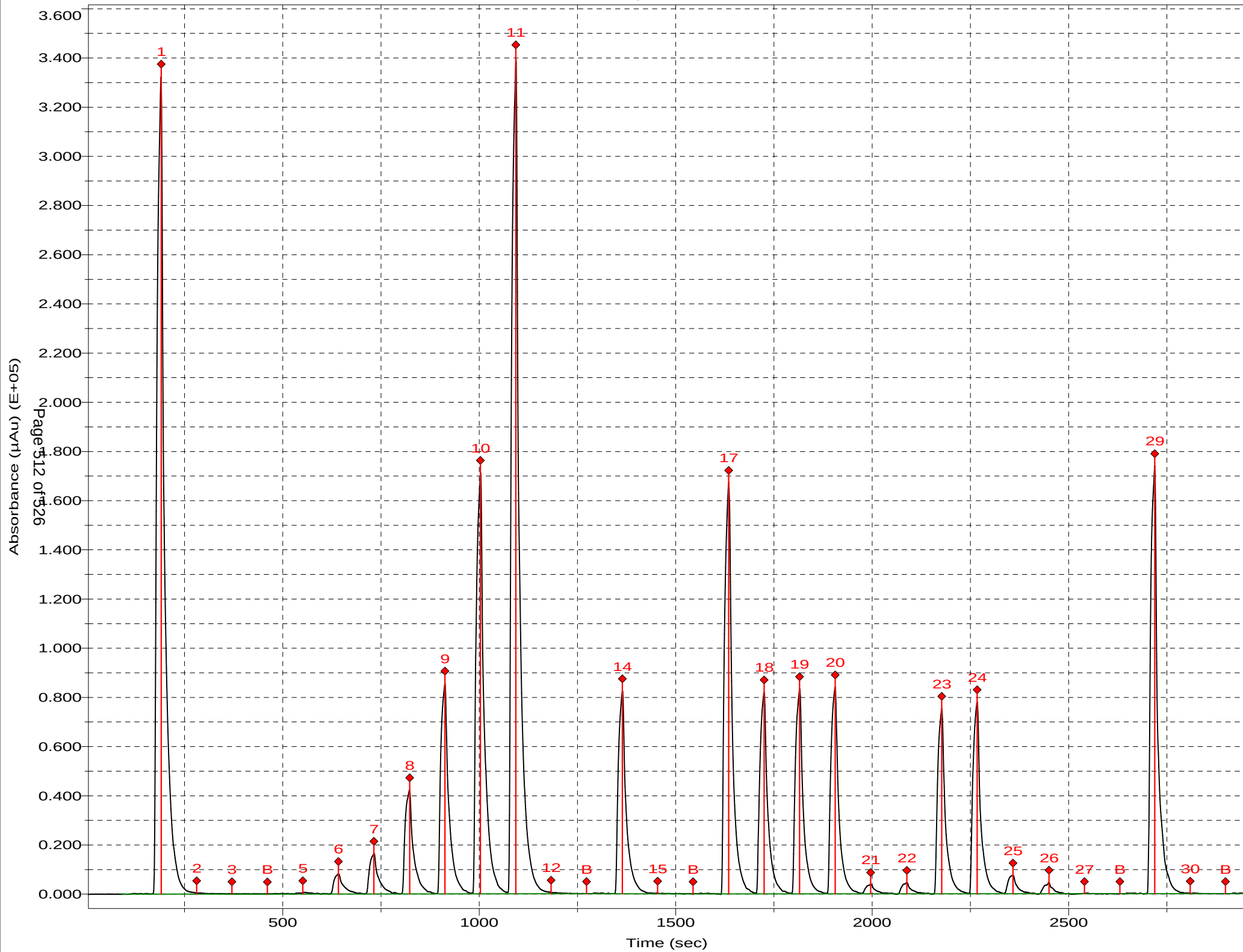
Corr Coef: 0.999989

Carryover: 0.13%

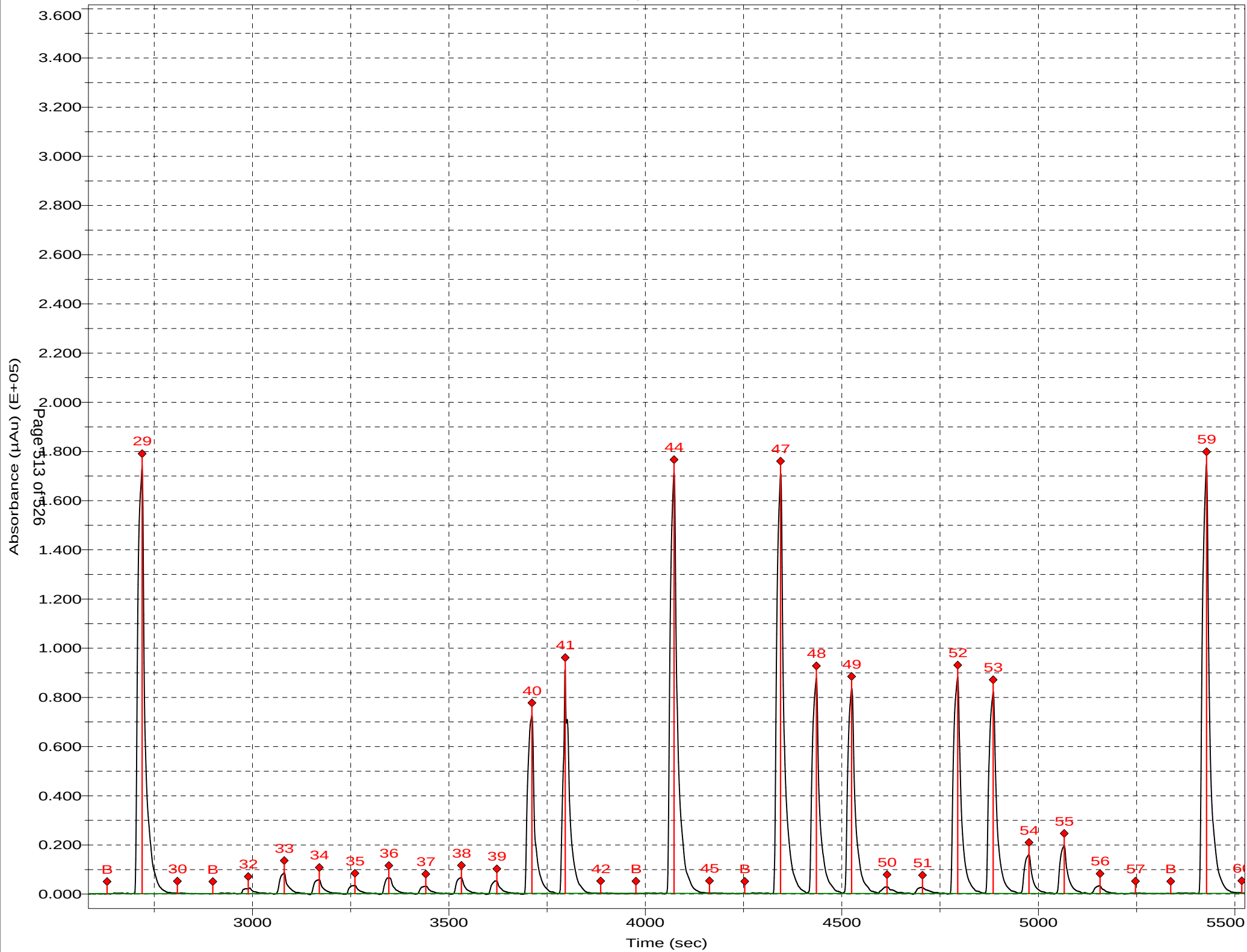
No Drift Peaks



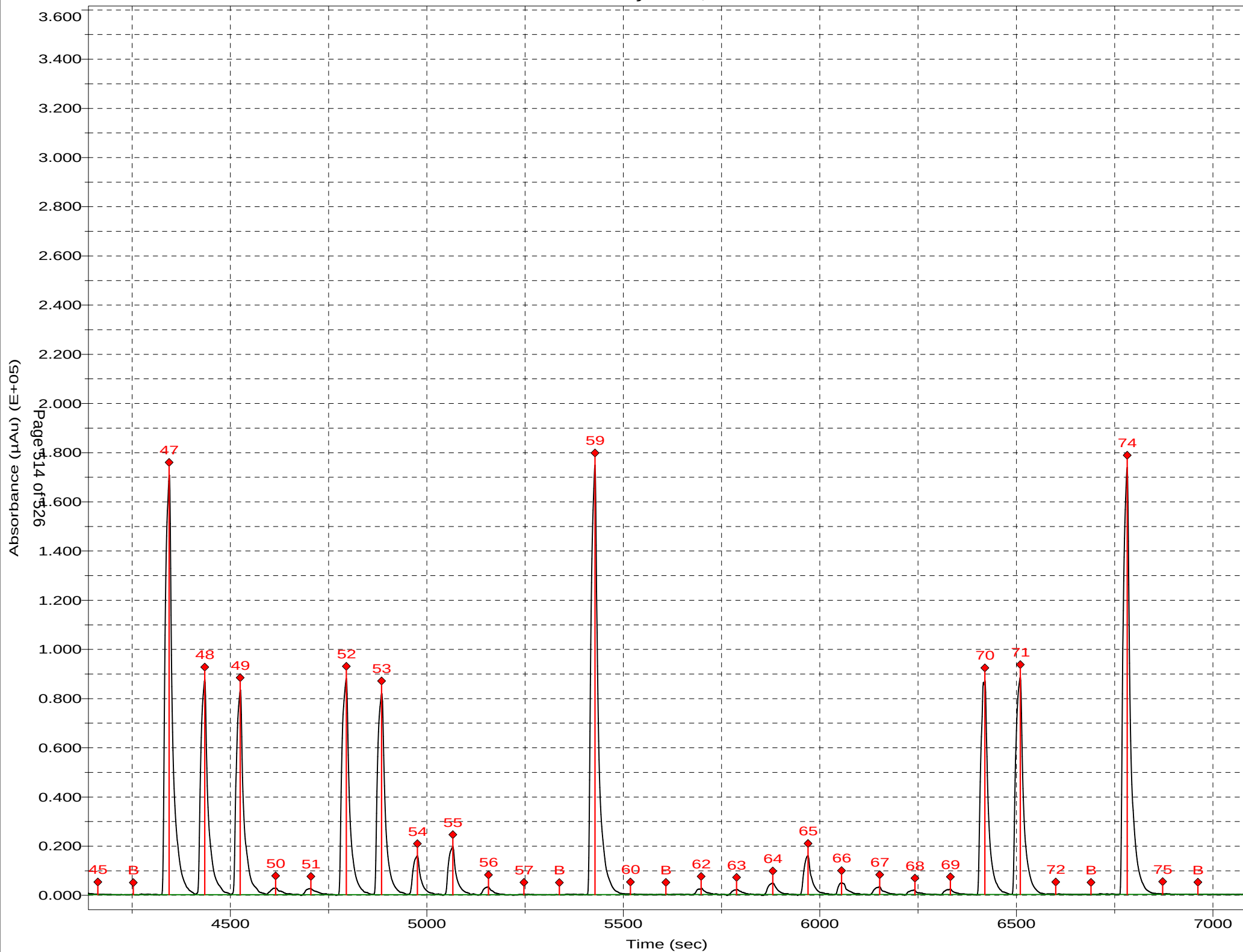
Channel 1: Cyanide, Total



Channel 1: Cyanide, Total



Channel 1: Cyanide, Total



Run Results Report

Facility Name
Facility Location
Department
Operator Name JML
Operator ID JML
Platform FS III/IV/3100
Software Rev Code 222
Data system ID 57

Result path C:\FLOW_4\C110916.RST
Sample table path C:\FLOW_4\c110916.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 09-Nov-16
Time acquired 13:23

----- Cyanide, Total -----					
Date	Time	Cup	Name	Response	Calc [ppb] Flags
09-Nov-16	11:31	107	Sync	336679	387.924
09-Nov-16	11:33	0	Carryover	260	-0.477 LO
09-Nov-16	11:34	0	Carryover	38	-0.733 LO
09-Nov-16	11:36	0	Baseline	0	-0.778 BL
09-Nov-16	11:37	101	CAL 0.00 ppb	128	-0.630 LO
09-Nov-16	11:39	102	CAL 10.0 ppb	8796	9.377
09-Nov-16	11:40	103	CAL 20.0 ppb	17513	19.442
09-Nov-16	11:42	104	CAL 50.0 ppb	44669	50.793
09-Nov-16	11:43	105	CAL 100 ppb	87828	100.621
09-Nov-16	11:45	106	Cal 200 ppb	174959	201.215
09-Nov-16	11:46	107	Cal 400 ppb	346431	399.182
09-Nov-16	11:48	0	BLK	109	-0.652 LO
09-Nov-16	11:49	0	Baseline	0	-0.778 BL
09-Nov-16	11:51	108	ICV 100 ppb	84975	97.327
09-Nov-16	11:52	0	ICB	-4	-0.782 LO
09-Nov-16	11:54	0	Baseline	0	-0.778 BL
09-Nov-16	11:55	113	hlcs 280-350428/1-a	169436	389.677
09-Nov-16	11:57	114	llcs 280-350428/2-a	83066	95.123
09-Nov-16	11:58	115	lcs 280-350428/3-a	84146	96.370
09-Nov-16	12:00	116	mb 280-350428/4-a	1026	0.407
09-Nov-16	12:01	117	280-90243-a-1-o	10051	10.826
09-Nov-16	12:03	118	280-90243-a-1-p ms	78155	89.453
09-Nov-16	12:04	119	280-90243-a-1-q msd	66283	75.747
09-Nov-16	12:06	120	280-90458-a-1-d	3823	3.636
09-Nov-16	12:07	121	hlcs 280-350530/1-a	166585	383.095
09-Nov-16	12:09	122	llcs 280-350530/2-a	85590	98.037
09-Nov-16	12:10	0	BLK	-17	-0.797 LO
09-Nov-16	12:12	0	baseline	0	-0.778 BL
09-Nov-16	12:13	109	CCV 200PPB	173526	199.560
09-Nov-16	12:15	0	CCB	-19	-0.800 LO
09-Nov-16	12:16	0	Baseline	0	-0.778 BL
09-Nov-16	12:18	123	lcs 280-350530/3-a	84517	96.799
09-Nov-16	12:20	124	mb 280-350530/4-a	1789	1.288
09-Nov-16	12:21	125	280-90355-g-1-a	2342	1.926
09-Nov-16	12:23	126	280-90355-g-1-b ms	85615	98.066
09-Nov-16	12:24	127	280-90355-g-1-c msd	83021	95.071
09-Nov-16	12:26	128	280-90355-g-2-a	3334	3.072
09-Nov-16	12:27	129	280-90355-g-3-a	4702	4.651
09-Nov-16	12:29	130	280-90355-g-4-a	2937	2.613
09-Nov-16	12:30	131	280-90355-g-5-a	1841	1.348
09-Nov-16	12:32	132	280-90355-g-6-a	2184	1.744
09-Nov-16	12:33	0	BLK	32	-0.741 LO
09-Nov-16	12:35	0	baseline	0	-0.778 BL
09-Nov-16	12:36	109	CCV 200PPB	176850	203.399
09-Nov-16	12:38	0	CCB	6	-0.771 LO
09-Nov-16	12:39	0	Baseline	0	-0.778 BL

Result path C:\FLOW_4\C110916.RST
Sample table path C:\FLOW_4\c110916.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 09-Nov-16
Time acquired 13:23

----- Cyanide, Total -----						
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
09-Nov-16	12:41	133	280-90355-g-7-a	3080	2.778	
09-Nov-16	12:42	134	280-90232-c-2-a	3124	2.829	
09-Nov-16	12:44	135	280-90276-e-1-a	4579	4.509	
09-Nov-16	12:45	136	280-90276-e-2-a	4001	3.842	
09-Nov-16	12:47	137	280-90276-e-3-a	1524	0.981	
09-Nov-16	12:48	138	280-90276-e-5-a	2495	2.103	
09-Nov-16	12:50	139	280-90276-e-5-b ms	87217	99.916	
09-Nov-16	12:51	140	280-90276-e-5-c msd	90284	103.457	
09-Nov-16	12:53	141	280-90276-e-6-a	3553	3.324	
09-Nov-16	12:54	142	320-23072-g-3-a	2479	2.084	
09-Nov-16	12:56	0	BLK	28	-0.745	LO
09-Nov-16	12:57	0	baseline	0	-0.778	BL
09-Nov-16	12:59	109	CCV 200PPB	176736	203.267	
09-Nov-16	13:00	0	CCB	-39	-0.822	LO
09-Nov-16	13:02	0	Baseline	0	-0.778	BL
09-Nov-16	13:03	143	320-23072-n-13-a	3001	2.687	
09-Nov-16	13:05	144	460-122822-e-11-a	2263	1.835	
09-Nov-16	13:06	145	460-122822-f-12-b	20224	22.571	
09-Nov-16	13:08	146	460-122822-f-13-a	37438	42.445	
09-Nov-16	13:09	147	280-90218-c-1-a	2678	2.315	
09-Nov-16	13:11	148	280-90218-h-1-a	3453	3.209	
09-Nov-16	13:12	0	BLK	39	-0.732	LO
09-Nov-16	13:14	0	baseline	0	-0.778	BL
09-Nov-16	13:15	109	CCV 200PPB	178559	205.371	
09-Nov-16	13:17	0	CCB	-147	-0.948	LO
09-Nov-16	13:18	0	Baseline	0	-0.778	BL

File name: C:\FLOW_4\C110916.RST

Date: 09-Nov-16

Operator: JML

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags	
1	107	Sync	1	SYNC		1	336679	387.923645		
2	0	Carryover	1	CO		1	260	-0.477274	LO	
3	0	Carryover	2	CO		1	38	-0.733226	LO	
B	0	Baseline	1	RB		1	0	-0.777573	BL	
5	101	CAL 0.00 ppb	1	C		1	128	-0.629921	LO	
6	102	CAL 10.0 ppb	1	C		1	8796	9.377460		
7	103	CAL 20.0 ppb	1	C		1	17513	19.441959		
8	104	CAL 50.0 ppb	1	C		1	44669	50.793236		
9	105	CAL 100 ppb	1	C		1	87828	100.620750		
10	106	Cal 200 ppb	1	C		1	174959	201.214798		
11	107	Cal 400 ppb	1	C		1	346431	399.181732		
12	0	BLK	1	BLNK		1	109	-0.652077	LO	
B	0	Baseline	1	RB		1	0	-0.777573	BL	
14	108	ICV 100 ppb	1	CCV		1	84975	97.326744		
15	0	ICB	1	U		1	-4	-0.781766	LO	
B	0	Baseline	1	RB		1	0	-0.777573	BL	
17	113	hlcs 280-350428/1-a	1	U		2	1	169436	389.676636	
18	114	llcs 280-350428/2-a	1	U		1	1	83066	95.123489	
19	115	lcs 280-350428/3-a	1	U		1	1	84146	96.370430	
20	116	mb 280-350428/4-a	1	U		1	1	1026	0.406923	
21	117	280-90243-a-1-o	1	U		1	1	10051	10.825963	
22	118	280-90243-a-1-p	ms	1	U	1	1	78155	89.453476	
23	119	280-90243-a-1-q	msd	1	U	1	1	66283	75.746635	
24	120	280-90458-a-1-d	1	U		1	1	3823	3.636253	
25	121	hlcs 280-350530/1-a	1	U		2	1	166585	383.094849	
26	122	llcs 280-350530/2-a	1	U		1	1	85590	98.037407	
27	0	BLK	1	BLNK		1	1	-17	-0.796938	LO
B	0	baseline	1	RB		1	1	0	-0.777573	BL
29	109	CCV 200PPB	1	CCV		1	1	173526	199.560440	
30	0	CCB	1	U		1	1	-19	-0.799586	LO
B	0	Baseline	1	RB		1	1	0	-0.777573	BL
32	123	lcs 280-350530/3-a	1	U		1	1	84517	96.798515	
33	124	mb 280-350530/4-a	1	U		1	1	1789	1.287733	
34	125	280-90355-g-1-a	1	U		1	1	2342	1.925930	
35	126	280-90355-g-1-b	ms	1	U	1	1	85615	98.066124	
36	127	280-90355-g-1-c	msd	1	U	1	1	83021	95.071350	
37	128	280-90355-g-2-a	1	U		1	1	3334	3.071507	
38	129	280-90355-g-3-a	1	U		1	1	4702	4.650858	
39	130	280-90355-g-4-a	1	U		1	1	2937	2.612900	
40	131	280-90355-g-5-a	1	U		1	1	1841	1.347655	
41	132	280-90355-g-6-a	1	U		1	1	2184	1.743904	
42	0	BLK	1	BLNK		1	1	32	-0.740711	LO
B	0	baseline	1	RB		1	1	0	-0.777573	BL
44	109	CCV 200PPB	1	CCV		1	1	176850	203.398666	
45	0	CCB	1	U		1	1	6	-0.770991	LO
B	0	Baseline	1	RB		1	1	0	-0.777573	BL
47	133	280-90355-g-7-a	1	U		1	1	3080	2.778057	
48	134	280-90232-c-2-a	1	U		1	1	3124	2.828763	
49	135	280-90276-e-1-a	1	U		1	1	4579	4.509263	
50	136	280-90276-e-2-a	1	U		1	1	4001	3.841738	
51	137	280-90276-e-3-a	1	U		1	1	1524	0.981455	
52	138	280-90276-e-5-a	1	U		1	1	2495	2.103319	
53	139	280-90276-e-5-b	ms	1	U	1	1	87217	99.915741	
54	140	280-90276-e-5-c	msd	1	U	1	1	90284	103.457062	
55	141	280-90276-e-6-a	1	U		1	1	3553	3.323867	
56	142	320-23072-g-3-a	1	U		1	1	2479	2.084079	
57	0	BLK	1	BLNK		1	1	28	-0.745418	LO
B	0	baseline	1	RB		1	1	0	-0.777573	BL
59	109	CCV 200PPB	1	CCV		1	1	176736	203.266510	
60	0	CCB	1	U		1	1	-39	-0.822346	LO
B	0	Baseline	1	RB		1	1	0	-0.777573	BL
62	143	320-23072-n-13-a	1	U		1	1	3001	2.687200	
63	144	460-122822-e-11-a	1	U		1	1	2263	1.834654	
64	145	460-122822-f-12-b	1	U		1	1	20224	22.570969	
65	146	460-122822-f-13-a	1	U		1	1	37438	42.444984	
66	147	280-90218-c-1-a	1	U		1	1	2678	2.314749	
67	148	280-90218-h-1-a	1	U		1	1	3453	3.208548	
68	0	BLK	1	BLNK		1	1	39	-0.732396	LO
B	0	baseline	1	RB		1	1	0	-0.777573	BL
70	109	CCV 200PPB	1	CCV		1	1	178559	205.371216	

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
71	0	CCB	1	U		1	1	-147	-0.947506 LO
B	0	Baseline	1	RB		1	1	0	-0.777573 BL

File name: C:\FLOW_4\C110916.RST

Date: 09-Nov-16

Operator: JML

* Name	Conc	Height
* CAL 0.00 ppb	0.000000	127.891197
* CAL 10.0 ppb	10.000000	8795.935547
* CAL 20.0 ppb	20.000000	17513.453125
* CAL 50.0 ppb	50.000000	44668.835938
* CAL 100 ppb	100.000000	87827.687500
* Cal 200 ppb	200.000000	174958.750000
* Cal 400 ppb	400.000000	346430.812500

Calib Coef:

y=bx+a

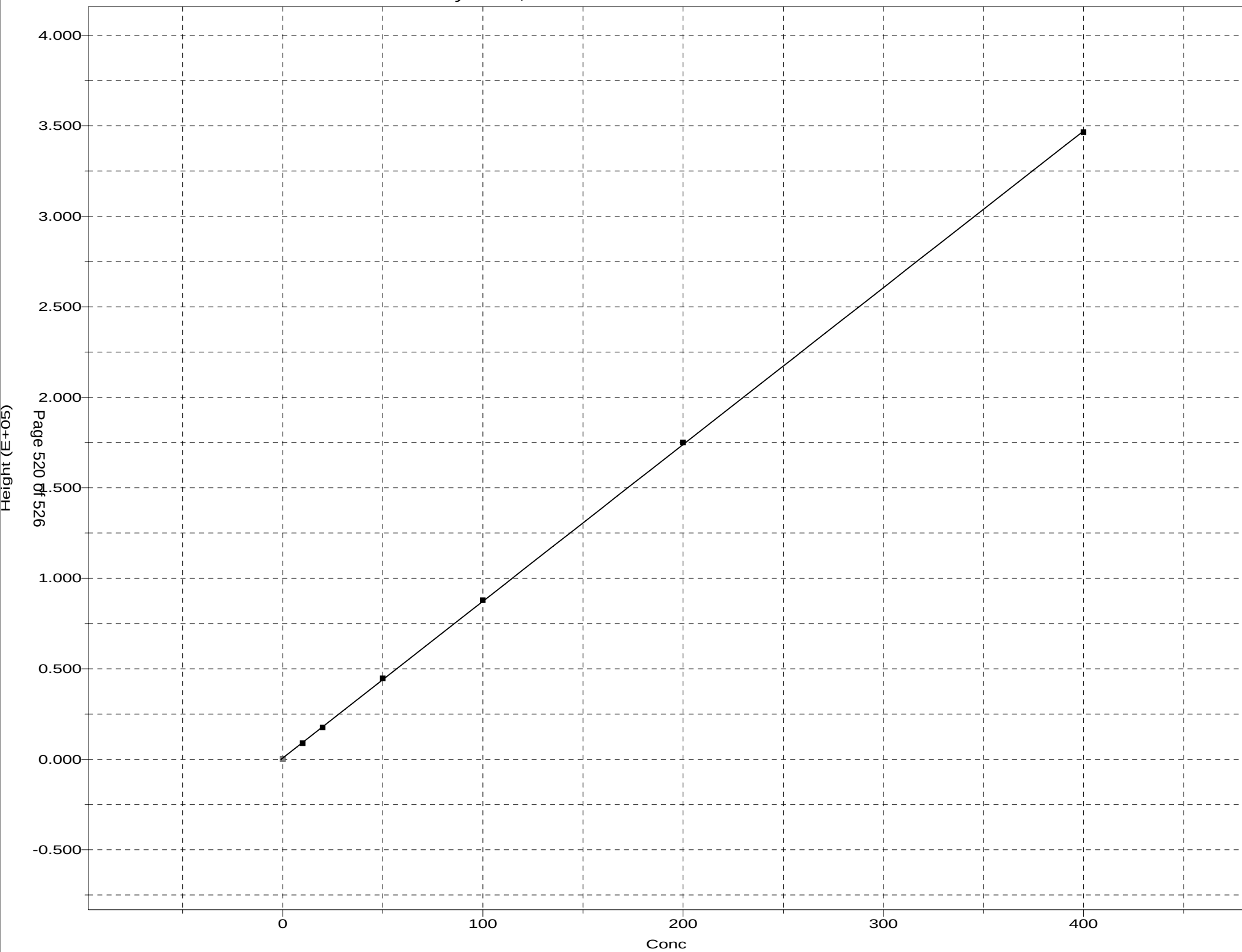
a: (intercept) 6.7351e+02

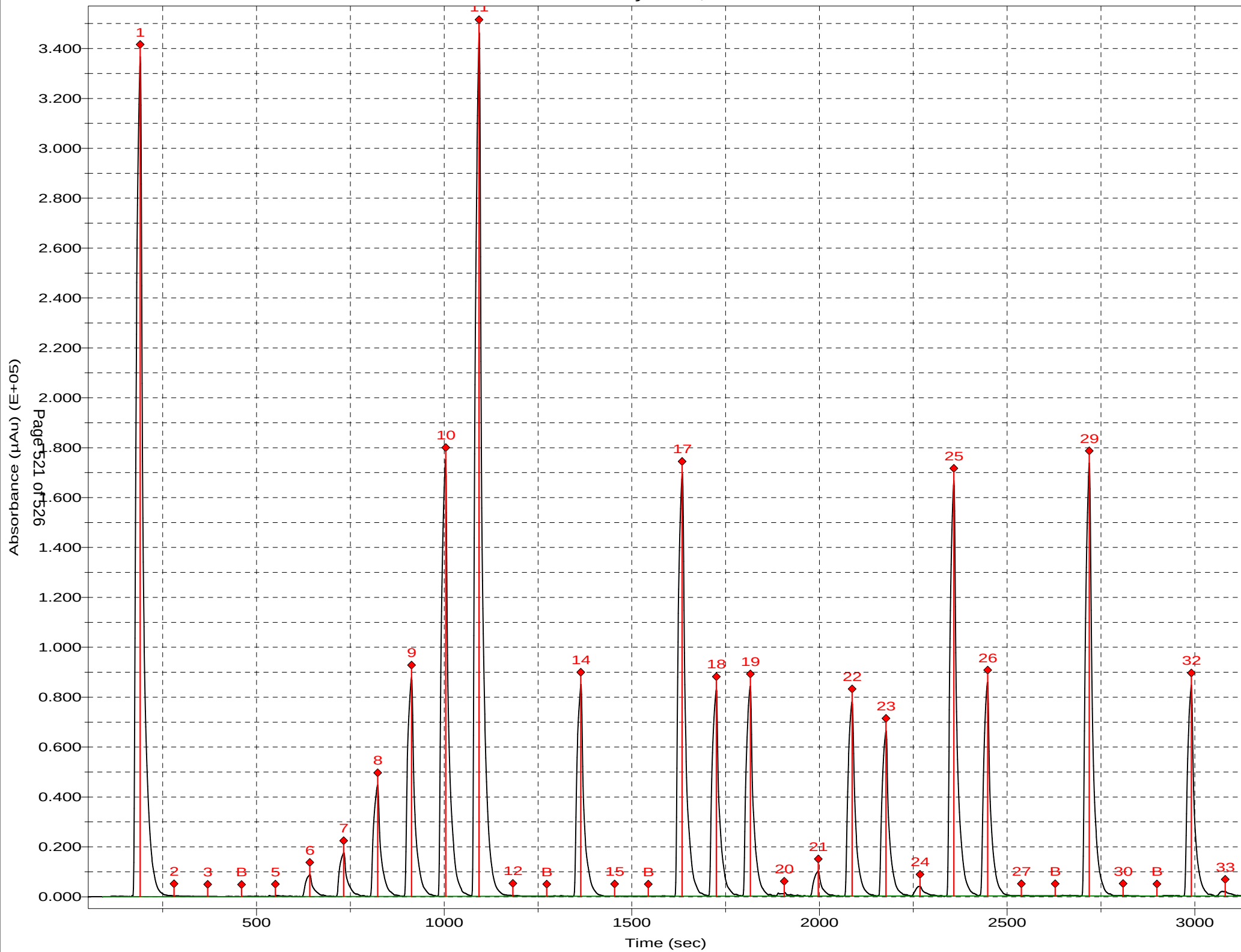
b: 8.6617e+02

Corr Coef: 0.999983

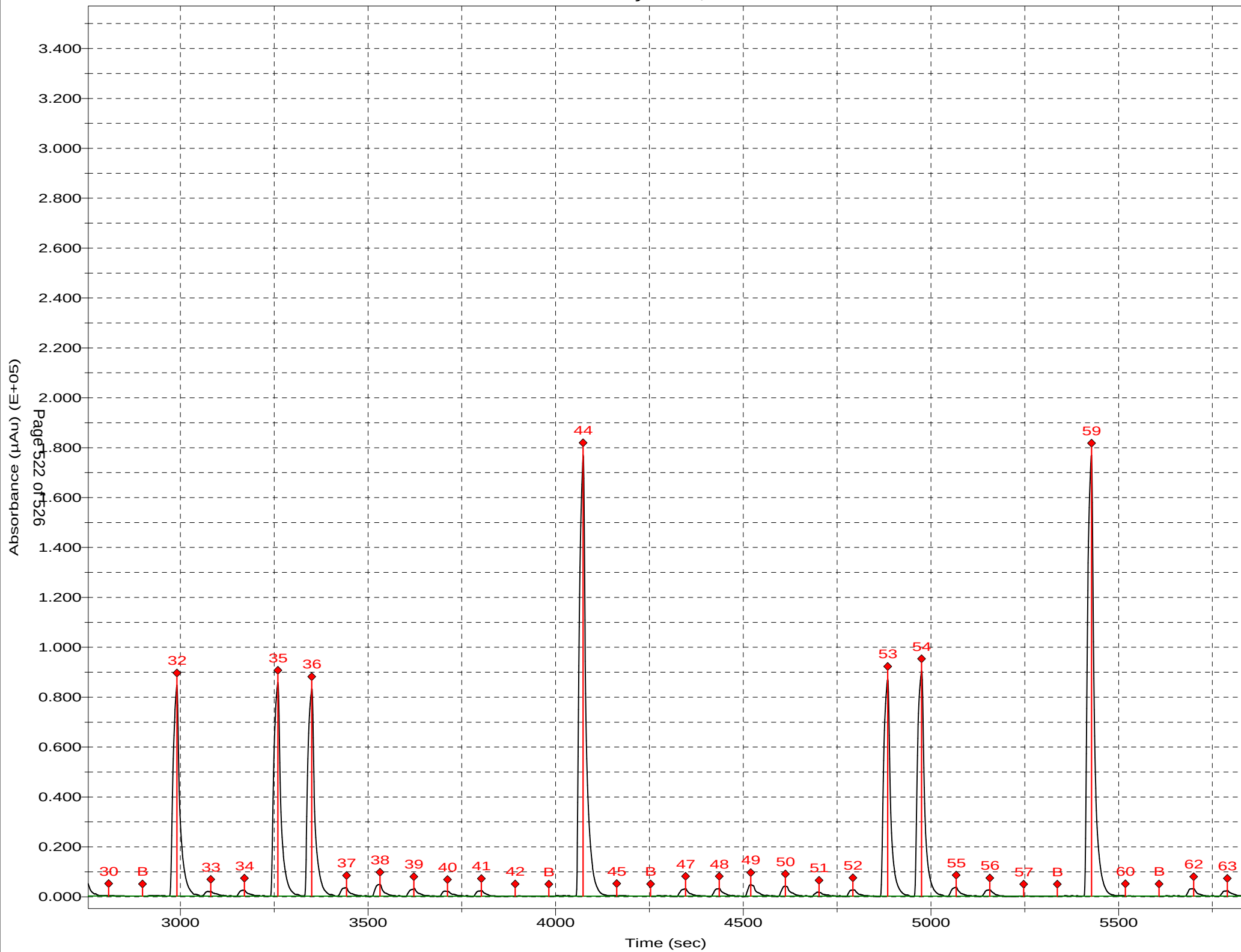
Carryover: 0.0773%

No Drift Peaks

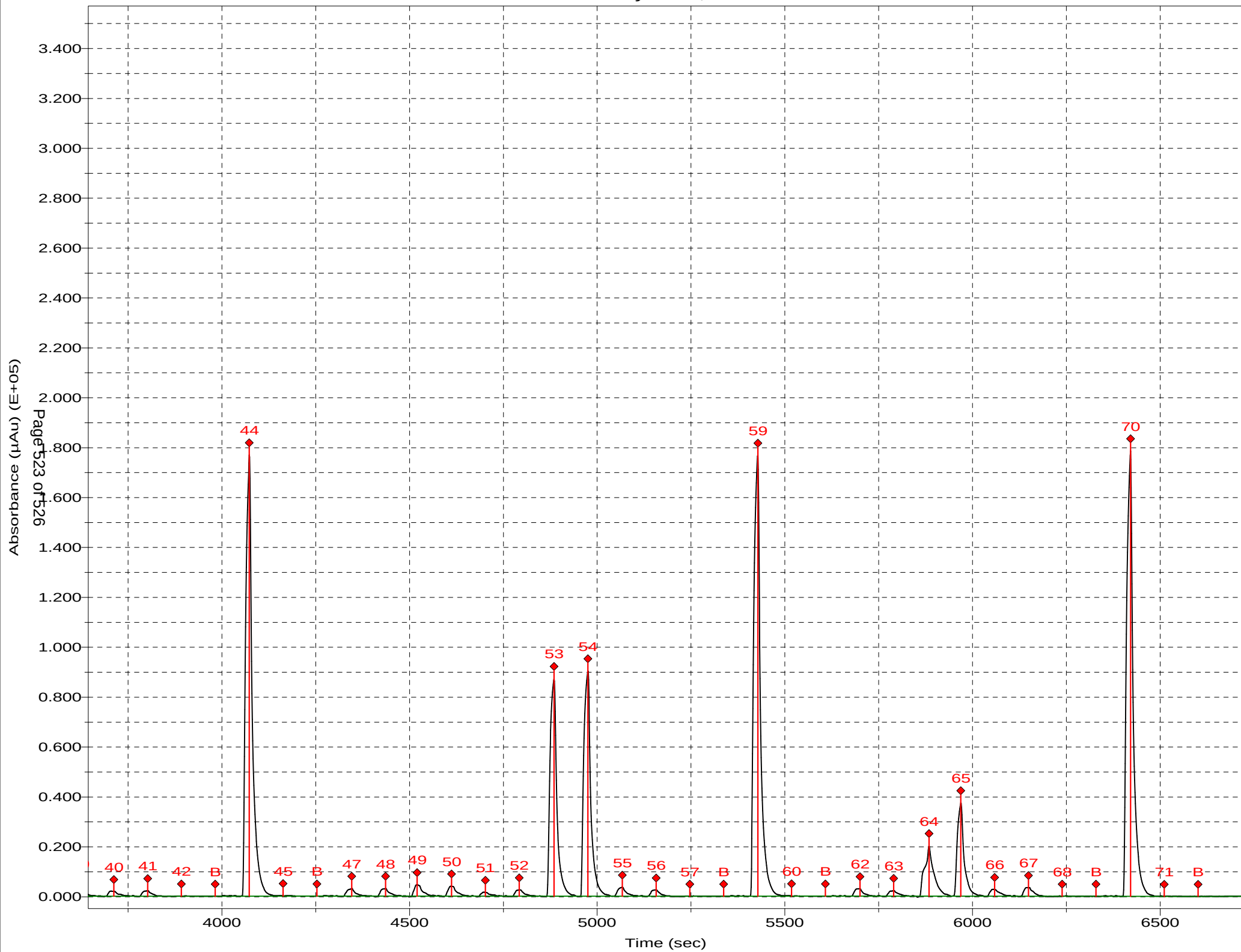




Channel 1: Cyanide, Total



Channel 1: Cyanide, Total



Shipping and Receiving Documents

Chain of Custody Record

Client Information

Client Contact:

Ms. Heather Miner

Company:

Cardno TEC, Inc

Address:

1658 Cole Boulevard Suite 190

City:

Golden

State, Zip:

CO, 80401

Phone:

PO #:

0091979

Email:

heather.miner@cardno-gs.com

Project Name:

Ravenna, OH - Load Line 5

Site:

SSOW#:

Sampler:

Phone:

E-Mail:

patrick.mcintee@testamericainc.com

Lab PM:

McEntee, Patrick J

Carrier Tracking No(s):

810481513305

COC No:

280-58614-20559.1

Page:

Page:

Job #:

Analysis Requested

Due Date Requested:

TAT Requested (days):

PO #:

WO #:

Project #:

28014271

SSOW#:

Sample Identification

Sample Date

Sample Time

Sample Type

Preservation Code

Matrix

(W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

Total Metals 6010C, D005, 6020A, D005, 7470A, D005

8260B, D005, VOCs

PCBs 8082A

Cyanide 9012B

Total Number of Containers

Special Instructions/Note:

Other:

Preservation Codes:

A - HCL

B - NaOH

C - Zn Acetate

D - Nitric Acid

E - NaHSO4

F - MeOH

G - Anhydrous

H - Ascorbic Acid

I - Ice

J - DI Water

K - EDTA

L - EDTA

M - Hexane

N - None

O - AsH2O2

P - Na2O4S

Q - Na2SO3

R - Na2SO3

S - H2SO4

T - TSP Dodecahydrate

U - Acetone

V - MCAA

W - pH 4-5

Z - other (specify)

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Relinquished by:

Custody Seal No.:

Seals Intact:

Seals Intact:

Seals Intact:

Seals Intact:

Date:

Date:

Date:

Date:

Date:

Company:

Company:

Company:

Company:

Company:

Cooler Temperature(s) °C and Other Remarks

0.740.0 IL#S transferred by JT 10/28/16

Cooler Temperature(s) °C and Other Remarks

Cooler Temperature(s) °C and Other Remarks

Cooler Temperature(s) °C and Other Remarks



280-90232 Chain of Custody

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months

Special Instructions/QC Requirements:

Method of Shipment:

Date/Time:

Date/Time:

Date/Time:

Date/Time:

Date/Time:

Company

Company

Company

Company

Company

Company

Company

Company

Login Sample Receipt Checklist

Client: Cardno TEC, Inc

Job Number: 280-90232-1

Login Number: 90232

List Source: TestAmerica Denver

List Number: 1

Creator: True, Joshua A

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	