

## ANALYTICAL REPORT

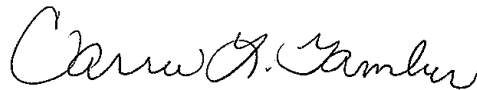
Job Number: 180-71467-1

Job Description: Harley Davidson

For:

Groundwater Sciences Corporation  
2601 Market Place Street, Suite 310  
Harrisburg, PA 17110-9307

Attention: Christopher O'Neil



Approved for release.  
Carrie L. Gamber  
Senior Project Manager  
10/27/2017 9:44 AM

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Carrie L Gamber, Senior Project Manager  
301 Alpha Drive, Pittsburgh, PA, 15238  
(412)963-2428  
carrie.gamber@testamericainc.com  
10/27/2017

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**TestAmerica Laboratories, Inc.**

TestAmerica Pittsburgh 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238  
Tel (412) 963-7058 Fax (412) 963-2468 [www.testamericainc.com](http://www.testamericainc.com)



# Table of Contents

Cover Title Page . . . . .	1
Data Summaries . . . . .	4
Definitions . . . . .	4
Case Narrative . . . . .	5
Detection Summary . . . . .	6
Client Sample Results . . . . .	8
Default Detection Limits . . . . .	18
Surrogate Summary . . . . .	19
QC Sample Results . . . . .	20
QC Association . . . . .	26
Chronicle . . . . .	27
Certification Summary . . . . .	29
Method Summary . . . . .	30
Sample Summary . . . . .	31
Manual Integration Summary . . . . .	32
Reagent Traceability . . . . .	35
COAs . . . . .	45
Organic Sample Data . . . . .	93
GC/MS VOA . . . . .	93
Method 8260C Low Level . . . . .	93
Method 8260C Low Level QC Summary . . . . .	94
Method 8260C Low Level Sample Data . . . . .	108
Standards Data . . . . .	201
Method 8260C Low Level ICAL Data . . . . .	201
Method 8260C Low Level CCAL Data . . . . .	256
Raw QC Data . . . . .	273

# Table of Contents

Method 8260C Low Level Tune Data .....	273
Method 8260C Low Level Blank Data .....	285
Method 8260C Low Level LCS/LCSD Data .....	301
Method 8260C Low Level MS/MSD Data .....	315
Method 8260C Low Level Run Logs .....	329
Shipping and Receiving Documents .....	332
Client Chain of Custody .....	333
Sample Receipt Checklist .....	335

# Definitions/Glossary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
^c	CCV Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

## 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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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: Groundwater Sciences Corporation**

**Project: Harley Davidson**

**Report Number: 180-71467-1**

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 10/18/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.1 C.

### **VOLATILES**

The following sample was diluted to bring the concentration of target analytes within the calibration range: HD-MW-103S-0/1-0 (180-71467-2). Elevated reporting limits (RLs) are provided.

The following analyte recovered outside control limits for the LCS associated with analytical batch 180-227010: Chloromethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Trichloroethene failed the recovery criteria low for the MS of sample HD-MW-102S-0/1-0 (180-71467-4) in batch 180-227010. Acetone and Chloromethane failed the recovery criteria high. For the MSD of sample HD-MW-102S-0/1-0 (180-71467-4) in batch 180-227010, Trichloroethene failed the recovery criteria low. Acetone failed the recovery criteria high. Acetone exceeded the RPD limit.

The continuing calibration verification (CCV) analyzed in batch 180-227010 was outside the method criteria for the following analytes: 1,4-Dioxane and Bromomethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 180-226849 was outside the method criteria for the following analytes: Chloromethane and 1,4-Dioxane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

# Detection Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

## Client Sample ID: HD-MW-103D-0/1-0

## Lab Sample ID: 180-71467-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.8		1.0	0.71	ug/L	1		8260C	Total/NA
Trichloroethene	2.2		1.0	0.69	ug/L	1		8260C	Total/NA
Tetrachloroethene	9.3		1.0	0.47	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-MW-103S-0/1-0

## Lab Sample ID: 180-71467-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.7	J	5.0	3.5	ug/L	5		8260C	Total/NA
Trichloroethene	54		5.0	3.4	ug/L	5		8260C	Total/NA
Tetrachloroethene	15		5.0	2.3	ug/L	5		8260C	Total/NA

## Client Sample ID: HD-MW-102D-0/1-0

## Lab Sample ID: 180-71467-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.4		1.0	0.71	ug/L	1		8260C	Total/NA
Trichloroethene	2.9		1.0	0.69	ug/L	1		8260C	Total/NA
Tetrachloroethene	6.9		1.0	0.47	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-MW-102S-0/1-0

## Lab Sample ID: 180-71467-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	4.6		1.0	0.55	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	1.2		1.0	0.63	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	6.0		1.0	0.71	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	4.6		1.0	0.60	ug/L	1		8260C	Total/NA
Trichloroethene	24	F1	1.0	0.69	ug/L	1		8260C	Total/NA
Tetrachloroethene	13		1.0	0.47	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-RW-2-0/1-0

## Lab Sample ID: 180-71467-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	3.4		1.0	0.69	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-MW-57-0/1-0

## Lab Sample ID: 180-71467-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	6.6		1.0	0.55	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	6.8		1.0	0.71	ug/L	1		8260C	Total/NA
Chloroform	0.64	J	1.0	0.60	ug/L	1		8260C	Total/NA
Trichloroethene	17		1.0	0.69	ug/L	1		8260C	Total/NA
Tetrachloroethene	1.3		1.0	0.47	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-QC1-0/1-2

## Lab Sample ID: 180-71467-7

No Detections.

## Client Sample ID: HD-QC1-0/1-1

## Lab Sample ID: 180-71467-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.6	J	5.0	3.4	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	3.2		1.0	0.71	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

# Detection Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

## Client Sample ID: HD-QC1-0/1-1 (Continued)

## Lab Sample ID: 180-71467-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	2.8		1.0	0.69	ug/L	1		8260C	Total/NA
Tetrachloroethene	7.6		1.0	0.47	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-QC1-0/1-3

## Lab Sample ID: 180-71467-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.84	J	1.0	0.46	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-QC1-0/1-4

## Lab Sample ID: 180-71467-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.5	J	5.0	3.4	ug/L	1		8260C	Total/NA
Toluene	0.82	J	1.0	0.46	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-MW-103D-0/1-0**

**Date Collected: 10/16/17 14:10**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U *	1.0	0.90	ug/L			10/26/17 02:08	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/26/17 02:08	1
Bromomethane	1.0	U ^c	1.0	0.89	ug/L			10/26/17 02:08	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/26/17 02:08	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/26/17 02:08	1
Acetone	5.0	U	5.0	3.4	ug/L			10/26/17 02:08	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/26/17 02:08	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/26/17 02:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/26/17 02:08	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/26/17 02:08	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/26/17 02:08	1
<b>cis-1,2-Dichloroethene</b>	<b>1.8</b>		1.0	0.71	ug/L			10/26/17 02:08	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/26/17 02:08	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/26/17 02:08	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/26/17 02:08	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 02:08	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/26/17 02:08	1
Benzene	1.0	U	1.0	0.60	ug/L			10/26/17 02:08	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 02:08	1
<b>Trichloroethene</b>	<b>2.2</b>		1.0	0.69	ug/L			10/26/17 02:08	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/26/17 02:08	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/26/17 02:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/26/17 02:08	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/26/17 02:08	1
Toluene	1.0	U	1.0	0.46	ug/L			10/26/17 02:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/26/17 02:08	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/26/17 02:08	1
<b>Tetrachloroethene</b>	<b>9.3</b>		1.0	0.47	ug/L			10/26/17 02:08	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/26/17 02:08	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/26/17 02:08	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/26/17 02:08	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/26/17 02:08	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 02:08	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/26/17 02:08	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/26/17 02:08	1
Styrene	1.0	U	1.0	0.47	ug/L			10/26/17 02:08	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/26/17 02:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 02:08	1
Acrylonitrile	20	U	20	7.8	ug/L			10/26/17 02:08	1
1,4-Dioxane	200	U	200	14	ug/L			10/26/17 02:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		65 - 121		10/26/17 02:08	1
Toluene-d8 (Surr)	88		73 - 120		10/26/17 02:08	1
4-Bromofluorobenzene (Surr)	90		80 - 120		10/26/17 02:08	1
Dibromofluoromethane (Surr)	102		73 - 120		10/26/17 02:08	1



# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-MW-103S-0/1-0**

**Date Collected: 10/16/17 11:57**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	5.0	U ^c	5.0	4.5	ug/L			10/25/17 08:03	5
Vinyl chloride	5.0	U	5.0	4.4	ug/L			10/25/17 08:03	5
Bromomethane	5.0	U	5.0	4.4	ug/L			10/25/17 08:03	5
Chloroethane	5.0	U	5.0	4.5	ug/L			10/25/17 08:03	5
1,1-Dichloroethene	5.0	U	5.0	2.8	ug/L			10/25/17 08:03	5
Acetone	25	U	25	17	ug/L			10/25/17 08:03	5
Carbon disulfide	5.0	U	5.0	4.4	ug/L			10/25/17 08:03	5
Methylene Chloride	5.0	U	5.0	1.8	ug/L			10/25/17 08:03	5
trans-1,2-Dichloroethene	5.0	U	5.0	3.4	ug/L			10/25/17 08:03	5
Methyl tert-butyl ether	5.0	U	5.0	3.0	ug/L			10/25/17 08:03	5
1,1-Dichloroethane	5.0	U	5.0	3.1	ug/L			10/25/17 08:03	5
<b>cis-1,2-Dichloroethene</b>	<b>3.7</b>	<b>J</b>	5.0	3.5	ug/L			10/25/17 08:03	5
Bromochloromethane	5.0	U	5.0	3.1	ug/L			10/25/17 08:03	5
2-Butanone (MEK)	25	U	25	13	ug/L			10/25/17 08:03	5
Chloroform	5.0	U	5.0	3.0	ug/L			10/25/17 08:03	5
1,1,1-Trichloroethane	5.0	U	5.0	3.0	ug/L			10/25/17 08:03	5
Carbon tetrachloride	5.0	U	5.0	4.4	ug/L			10/25/17 08:03	5
Benzene	5.0	U	5.0	3.0	ug/L			10/25/17 08:03	5
1,2-Dichloroethane	5.0	U	5.0	2.9	ug/L			10/25/17 08:03	5
<b>Trichloroethene</b>	<b>54</b>		5.0	3.4	ug/L			10/25/17 08:03	5
1,2-Dichloropropane	5.0	U	5.0	3.3	ug/L			10/25/17 08:03	5
Bromodichloromethane	5.0	U	5.0	3.2	ug/L			10/25/17 08:03	5
cis-1,3-Dichloropropene	5.0	U	5.0	3.0	ug/L			10/25/17 08:03	5
4-Methyl-2-pentanone (MIBK)	25	U	25	15	ug/L			10/25/17 08:03	5
Toluene	5.0	U	5.0	2.3	ug/L			10/25/17 08:03	5
trans-1,3-Dichloropropene	5.0	U	5.0	2.9	ug/L			10/25/17 08:03	5
1,1,2-Trichloroethane	5.0	U	5.0	2.3	ug/L			10/25/17 08:03	5
<b>Tetrachloroethene</b>	<b>15</b>		5.0	2.3	ug/L			10/25/17 08:03	5
2-Hexanone	25	U	25	16	ug/L			10/25/17 08:03	5
Dibromochloromethane	5.0	U	5.0	4.2	ug/L			10/25/17 08:03	5
1,2-Dibromoethane (EDB)	5.0	U	5.0	2.5	ug/L			10/25/17 08:03	5
Chlorobenzene	5.0	U	5.0	2.5	ug/L			10/25/17 08:03	5
1,1,1,2-Tetrachloroethane	5.0	U	5.0	2.9	ug/L			10/25/17 08:03	5
Ethylbenzene	5.0	U	5.0	2.5	ug/L			10/25/17 08:03	5
Xylenes, Total	10	U	10	4.5	ug/L			10/25/17 08:03	5
Styrene	5.0	U	5.0	2.4	ug/L			10/25/17 08:03	5
Bromoform	5.0	U	5.0	4.9	ug/L			10/25/17 08:03	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	3.0	ug/L			10/25/17 08:03	5
Acrylonitrile	100	U	100	39	ug/L			10/25/17 08:03	5
1,4-Dioxane	1000	U	1000	68	ug/L			10/25/17 08:03	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		65 - 121		10/25/17 08:03	5
Toluene-d8 (Surr)	92		73 - 120		10/25/17 08:03	5
4-Bromofluorobenzene (Surr)	89		80 - 120		10/25/17 08:03	5
Dibromofluoromethane (Surr)	103		73 - 120		10/25/17 08:03	5

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-MW-102D-0/1-0**

**Date Collected: 10/17/17 11:45**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U*	1.0	0.90	ug/L			10/26/17 02:31	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/26/17 02:31	1
Bromomethane	1.0	U ^c	1.0	0.89	ug/L			10/26/17 02:31	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/26/17 02:31	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/26/17 02:31	1
Acetone	5.0	U	5.0	3.4	ug/L			10/26/17 02:31	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/26/17 02:31	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/26/17 02:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/26/17 02:31	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/26/17 02:31	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/26/17 02:31	1
<b>cis-1,2-Dichloroethene</b>	<b>3.4</b>		1.0	0.71	ug/L			10/26/17 02:31	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/26/17 02:31	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/26/17 02:31	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/26/17 02:31	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 02:31	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/26/17 02:31	1
Benzene	1.0	U	1.0	0.60	ug/L			10/26/17 02:31	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 02:31	1
<b>Trichloroethene</b>	<b>2.9</b>		1.0	0.69	ug/L			10/26/17 02:31	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/26/17 02:31	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/26/17 02:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/26/17 02:31	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/26/17 02:31	1
Toluene	1.0	U	1.0	0.46	ug/L			10/26/17 02:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/26/17 02:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/26/17 02:31	1
<b>Tetrachloroethene</b>	<b>6.9</b>		1.0	0.47	ug/L			10/26/17 02:31	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/26/17 02:31	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/26/17 02:31	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/26/17 02:31	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/26/17 02:31	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 02:31	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/26/17 02:31	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/26/17 02:31	1
Styrene	1.0	U	1.0	0.47	ug/L			10/26/17 02:31	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/26/17 02:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 02:31	1
Acrylonitrile	20	U	20	7.8	ug/L			10/26/17 02:31	1
1,4-Dioxane	200	U	200	14	ug/L			10/26/17 02:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		65 - 121		10/26/17 02:31	1
Toluene-d8 (Surr)	86		73 - 120		10/26/17 02:31	1
4-Bromofluorobenzene (Surr)	83		80 - 120		10/26/17 02:31	1
Dibromofluoromethane (Surr)	104		73 - 120		10/26/17 02:31	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-MW-102S-0/1-0**

**Date Collected: 10/17/17 14:08**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U * F1	1.0	0.90	ug/L			10/26/17 00:27	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/26/17 00:27	1
Bromomethane	1.0	U ^c	1.0	0.89	ug/L			10/26/17 00:27	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/26/17 00:27	1
<b>1,1-Dichloroethene</b>	<b>4.6</b>		1.0	0.55	ug/L			10/26/17 00:27	1
Acetone	5.0	U F1 F2	5.0	3.4	ug/L			10/26/17 00:27	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/26/17 00:27	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/26/17 00:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/26/17 00:27	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/26/17 00:27	1
<b>1,1-Dichloroethane</b>	<b>1.2</b>		1.0	0.63	ug/L			10/26/17 00:27	1
<b>cis-1,2-Dichloroethene</b>	<b>6.0</b>		1.0	0.71	ug/L			10/26/17 00:27	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/26/17 00:27	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/26/17 00:27	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/26/17 00:27	1
<b>1,1,1-Trichloroethane</b>	<b>4.6</b>		1.0	0.60	ug/L			10/26/17 00:27	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/26/17 00:27	1
Benzene	1.0	U	1.0	0.60	ug/L			10/26/17 00:27	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 00:27	1
<b>Trichloroethene</b>	<b>24 F1</b>		1.0	0.69	ug/L			10/26/17 00:27	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/26/17 00:27	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/26/17 00:27	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/26/17 00:27	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/26/17 00:27	1
Toluene	1.0	U	1.0	0.46	ug/L			10/26/17 00:27	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/26/17 00:27	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/26/17 00:27	1
<b>Tetrachloroethene</b>	<b>13</b>		1.0	0.47	ug/L			10/26/17 00:27	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/26/17 00:27	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/26/17 00:27	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/26/17 00:27	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/26/17 00:27	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 00:27	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/26/17 00:27	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/26/17 00:27	1
Styrene	1.0	U	1.0	0.47	ug/L			10/26/17 00:27	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/26/17 00:27	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 00:27	1
Acrylonitrile	20	U	20	7.8	ug/L			10/26/17 00:27	1
1,4-Dioxane	200	U	200	14	ug/L			10/26/17 00:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		65 - 121		10/26/17 00:27	1
Toluene-d8 (Surr)	92		73 - 120		10/26/17 00:27	1
4-Bromofluorobenzene (Surr)	90		80 - 120		10/26/17 00:27	1
Dibromofluoromethane (Surr)	107		73 - 120		10/26/17 00:27	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-RW-2-0/1-0**

**Date Collected: 10/17/17 13:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-5**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U ^c	1.0	0.90	ug/L			10/25/17 09:15	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/25/17 09:15	1
Bromomethane	1.0	U	1.0	0.89	ug/L			10/25/17 09:15	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/25/17 09:15	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/25/17 09:15	1
Acetone	5.0	U	5.0	3.4	ug/L			10/25/17 09:15	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/25/17 09:15	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/25/17 09:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/25/17 09:15	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/25/17 09:15	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/25/17 09:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.71	ug/L			10/25/17 09:15	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/25/17 09:15	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/25/17 09:15	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/25/17 09:15	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 09:15	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/25/17 09:15	1
Benzene	1.0	U	1.0	0.60	ug/L			10/25/17 09:15	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 09:15	1
<b>Trichloroethene</b>	<b>3.4</b>		1.0	0.69	ug/L			10/25/17 09:15	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/25/17 09:15	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/25/17 09:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/25/17 09:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/25/17 09:15	1
Toluene	1.0	U	1.0	0.46	ug/L			10/25/17 09:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/25/17 09:15	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/25/17 09:15	1
Tetrachloroethene	1.0	U	1.0	0.47	ug/L			10/25/17 09:15	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/25/17 09:15	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/25/17 09:15	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/25/17 09:15	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/25/17 09:15	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 09:15	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/25/17 09:15	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/25/17 09:15	1
Styrene	1.0	U	1.0	0.47	ug/L			10/25/17 09:15	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/25/17 09:15	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 09:15	1
Acrylonitrile	20	U	20	7.8	ug/L			10/25/17 09:15	1
1,4-Dioxane	200	U	200	14	ug/L			10/25/17 09:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		65 - 121		10/25/17 09:15	1
Toluene-d8 (Surr)	88		73 - 120		10/25/17 09:15	1
4-Bromofluorobenzene (Surr)	87		80 - 120		10/25/17 09:15	1
Dibromofluoromethane (Surr)	105		73 - 120		10/25/17 09:15	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-MW-57-0/1-0**

**Date Collected: 10/17/17 14:15**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-6**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U ^c	1.0	0.90	ug/L			10/25/17 09:39	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/25/17 09:39	1
Bromomethane	1.0	U	1.0	0.89	ug/L			10/25/17 09:39	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/25/17 09:39	1
<b>1,1-Dichloroethene</b>	<b>6.6</b>		1.0	0.55	ug/L			10/25/17 09:39	1
Acetone	5.0	U	5.0	3.4	ug/L			10/25/17 09:39	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/25/17 09:39	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/25/17 09:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/25/17 09:39	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/25/17 09:39	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/25/17 09:39	1
<b>cis-1,2-Dichloroethene</b>	<b>6.8</b>		1.0	0.71	ug/L			10/25/17 09:39	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/25/17 09:39	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/25/17 09:39	1
<b>Chloroform</b>	<b>0.64</b>	<b>J</b>	1.0	0.60	ug/L			10/25/17 09:39	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 09:39	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/25/17 09:39	1
Benzene	1.0	U	1.0	0.60	ug/L			10/25/17 09:39	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 09:39	1
<b>Trichloroethene</b>	<b>17</b>		1.0	0.69	ug/L			10/25/17 09:39	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/25/17 09:39	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/25/17 09:39	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/25/17 09:39	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/25/17 09:39	1
Toluene	1.0	U	1.0	0.46	ug/L			10/25/17 09:39	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/25/17 09:39	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/25/17 09:39	1
<b>Tetrachloroethene</b>	<b>1.3</b>		1.0	0.47	ug/L			10/25/17 09:39	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/25/17 09:39	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/25/17 09:39	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/25/17 09:39	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/25/17 09:39	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 09:39	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/25/17 09:39	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/25/17 09:39	1
Styrene	1.0	U	1.0	0.47	ug/L			10/25/17 09:39	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/25/17 09:39	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 09:39	1
Acrylonitrile	20	U	20	7.8	ug/L			10/25/17 09:39	1
1,4-Dioxane	200	U	200	14	ug/L			10/25/17 09:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		65 - 121		10/25/17 09:39	1
Toluene-d8 (Surr)	90		73 - 120		10/25/17 09:39	1
4-Bromofluorobenzene (Surr)	86		80 - 120		10/25/17 09:39	1
Dibromofluoromethane (Surr)	105		73 - 120		10/25/17 09:39	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-QC1-0/1-2**

**Date Collected: 10/17/17 12:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-7**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U ^c	1.0	0.90	ug/L			10/25/17 10:03	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/25/17 10:03	1
Bromomethane	1.0	U	1.0	0.89	ug/L			10/25/17 10:03	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/25/17 10:03	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/25/17 10:03	1
Acetone	5.0	U	5.0	3.4	ug/L			10/25/17 10:03	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/25/17 10:03	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/25/17 10:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/25/17 10:03	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/25/17 10:03	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/25/17 10:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.71	ug/L			10/25/17 10:03	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/25/17 10:03	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/25/17 10:03	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/25/17 10:03	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 10:03	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/25/17 10:03	1
Benzene	1.0	U	1.0	0.60	ug/L			10/25/17 10:03	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 10:03	1
Trichloroethene	1.0	U	1.0	0.69	ug/L			10/25/17 10:03	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/25/17 10:03	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/25/17 10:03	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/25/17 10:03	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/25/17 10:03	1
Toluene	1.0	U	1.0	0.46	ug/L			10/25/17 10:03	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/25/17 10:03	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/25/17 10:03	1
Tetrachloroethene	1.0	U	1.0	0.47	ug/L			10/25/17 10:03	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/25/17 10:03	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/25/17 10:03	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/25/17 10:03	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/25/17 10:03	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 10:03	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/25/17 10:03	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/25/17 10:03	1
Styrene	1.0	U	1.0	0.47	ug/L			10/25/17 10:03	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/25/17 10:03	1
1,1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 10:03	1
Acrylonitrile	20	U	20	7.8	ug/L			10/25/17 10:03	1
1,4-Dioxane	200	U	200	14	ug/L			10/25/17 10:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		65 - 121		10/25/17 10:03	1
Toluene-d8 (Surr)	90		73 - 120		10/25/17 10:03	1
4-Bromofluorobenzene (Surr)	86		80 - 120		10/25/17 10:03	1
Dibromofluoromethane (Surr)	110		73 - 120		10/25/17 10:03	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-QC1-0/1-1**

**Date Collected: 10/17/17 08:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-8**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U*	1.0	0.90	ug/L			10/26/17 02:55	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/26/17 02:55	1
Bromomethane	1.0	U ^c	1.0	0.89	ug/L			10/26/17 02:55	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/26/17 02:55	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/26/17 02:55	1
<b>Acetone</b>	<b>4.6</b>	<b>J</b>	5.0	3.4	ug/L			10/26/17 02:55	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/26/17 02:55	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/26/17 02:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/26/17 02:55	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/26/17 02:55	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/26/17 02:55	1
<b>cis-1,2-Dichloroethene</b>	<b>3.2</b>		1.0	0.71	ug/L			10/26/17 02:55	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/26/17 02:55	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/26/17 02:55	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/26/17 02:55	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 02:55	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/26/17 02:55	1
Benzene	1.0	U	1.0	0.60	ug/L			10/26/17 02:55	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 02:55	1
<b>Trichloroethene</b>	<b>2.8</b>		1.0	0.69	ug/L			10/26/17 02:55	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/26/17 02:55	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/26/17 02:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/26/17 02:55	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/26/17 02:55	1
Toluene	1.0	U	1.0	0.46	ug/L			10/26/17 02:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/26/17 02:55	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/26/17 02:55	1
<b>Tetrachloroethene</b>	<b>7.6</b>		1.0	0.47	ug/L			10/26/17 02:55	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/26/17 02:55	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/26/17 02:55	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/26/17 02:55	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/26/17 02:55	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 02:55	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/26/17 02:55	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/26/17 02:55	1
Styrene	1.0	U	1.0	0.47	ug/L			10/26/17 02:55	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/26/17 02:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 02:55	1
Acrylonitrile	20	U	20	7.8	ug/L			10/26/17 02:55	1
1,4-Dioxane	200	U	200	14	ug/L			10/26/17 02:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		65 - 121		10/26/17 02:55	1
Toluene-d8 (Surr)	91		73 - 120		10/26/17 02:55	1
4-Bromofluorobenzene (Surr)	88		80 - 120		10/26/17 02:55	1
Dibromofluoromethane (Surr)	105		73 - 120		10/26/17 02:55	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-QC1-0/1-3**

**Date Collected: 10/17/17 13:10**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-9**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U*	1.0	0.90	ug/L			10/26/17 03:19	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/26/17 03:19	1
Bromomethane	1.0	U ^c	1.0	0.89	ug/L			10/26/17 03:19	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/26/17 03:19	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/26/17 03:19	1
Acetone	5.0	U	5.0	3.4	ug/L			10/26/17 03:19	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/26/17 03:19	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/26/17 03:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/26/17 03:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/26/17 03:19	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/26/17 03:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.71	ug/L			10/26/17 03:19	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/26/17 03:19	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/26/17 03:19	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/26/17 03:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 03:19	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/26/17 03:19	1
Benzene	1.0	U	1.0	0.60	ug/L			10/26/17 03:19	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 03:19	1
Trichloroethene	1.0	U	1.0	0.69	ug/L			10/26/17 03:19	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/26/17 03:19	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/26/17 03:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/26/17 03:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/26/17 03:19	1
<b>Toluene</b>	<b>0.84</b>	<b>J</b>	1.0	0.46	ug/L			10/26/17 03:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/26/17 03:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/26/17 03:19	1
Tetrachloroethene	1.0	U	1.0	0.47	ug/L			10/26/17 03:19	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/26/17 03:19	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/26/17 03:19	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/26/17 03:19	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/26/17 03:19	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 03:19	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/26/17 03:19	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/26/17 03:19	1
Styrene	1.0	U	1.0	0.47	ug/L			10/26/17 03:19	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/26/17 03:19	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 03:19	1
Acrylonitrile	20	U	20	7.8	ug/L			10/26/17 03:19	1
1,4-Dioxane	200	U	200	14	ug/L			10/26/17 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		65 - 121		10/26/17 03:19	1
Toluene-d8 (Surr)	90		73 - 120		10/26/17 03:19	1
4-Bromofluorobenzene (Surr)	90		80 - 120		10/26/17 03:19	1
Dibromofluoromethane (Surr)	109		73 - 120		10/26/17 03:19	1



# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Client Sample ID: HD-QC1-0/1-4**

**Date Collected: 10/17/17 13:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-10**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U*	1.0	0.90	ug/L			10/26/17 03:43	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/26/17 03:43	1
Bromomethane	1.0	U ^c	1.0	0.89	ug/L			10/26/17 03:43	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/26/17 03:43	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/26/17 03:43	1
<b>Acetone</b>	<b>3.5</b>	<b>J</b>	5.0	3.4	ug/L			10/26/17 03:43	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/26/17 03:43	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/26/17 03:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/26/17 03:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/26/17 03:43	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/26/17 03:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.71	ug/L			10/26/17 03:43	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/26/17 03:43	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/26/17 03:43	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/26/17 03:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 03:43	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/26/17 03:43	1
Benzene	1.0	U	1.0	0.60	ug/L			10/26/17 03:43	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 03:43	1
Trichloroethene	1.0	U	1.0	0.69	ug/L			10/26/17 03:43	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/26/17 03:43	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/26/17 03:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/26/17 03:43	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/26/17 03:43	1
<b>Toluene</b>	<b>0.82</b>	<b>J</b>	1.0	0.46	ug/L			10/26/17 03:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/26/17 03:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/26/17 03:43	1
Tetrachloroethene	1.0	U	1.0	0.47	ug/L			10/26/17 03:43	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/26/17 03:43	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/26/17 03:43	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/26/17 03:43	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/26/17 03:43	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/26/17 03:43	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/26/17 03:43	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/26/17 03:43	1
Styrene	1.0	U	1.0	0.47	ug/L			10/26/17 03:43	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/26/17 03:43	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/26/17 03:43	1
Acrylonitrile	20	U	20	7.8	ug/L			10/26/17 03:43	1
1,4-Dioxane	200	U	200	14	ug/L			10/26/17 03:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		65 - 121		10/26/17 03:43	1
Toluene-d8 (Surr)	90		73 - 120		10/26/17 03:43	1
4-Bromofluorobenzene (Surr)	86		80 - 120		10/26/17 03:43	1
Dibromofluoromethane (Surr)	113		73 - 120		10/26/17 03:43	1

## Default Detection Limits

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.57	ug/L	8260C
1,1,1-Trichloroethane	1.0	0.60	ug/L	8260C
1,1,2,2-Tetrachloroethane	1.0	0.60	ug/L	8260C
1,1,2-Trichloroethane	1.0	0.45	ug/L	8260C
1,1-Dichloroethane	1.0	0.63	ug/L	8260C
1,1-Dichloroethene	1.0	0.55	ug/L	8260C
1,2-Dibromoethane (EDB)	1.0	0.50	ug/L	8260C
1,2-Dichloroethane	1.0	0.57	ug/L	8260C
1,2-Dichloropropane	1.0	0.66	ug/L	8260C
1,4-Dioxane	200	14	ug/L	8260C
2-Butanone (MEK)	5.0	2.6	ug/L	8260C
2-Hexanone	5.0	3.3	ug/L	8260C
4-Methyl-2-pentanone (MIBK)	5.0	3.1	ug/L	8260C
Acetone	5.0	3.4	ug/L	8260C
Acrylonitrile	20	7.8	ug/L	8260C
Benzene	1.0	0.60	ug/L	8260C
Bromochloromethane	1.0	0.63	ug/L	8260C
Bromodichloromethane	1.0	0.64	ug/L	8260C
Bromoform	1.0	0.98	ug/L	8260C
Bromomethane	1.0	0.89	ug/L	8260C
Carbon disulfide	1.0	0.88	ug/L	8260C
Carbon tetrachloride	1.0	0.88	ug/L	8260C
Chlorobenzene	1.0	0.50	ug/L	8260C
Chloroethane	1.0	0.90	ug/L	8260C
Chloroform	1.0	0.60	ug/L	8260C
Chloromethane	1.0	0.90	ug/L	8260C
cis-1,2-Dichloroethene	1.0	0.71	ug/L	8260C
cis-1,3-Dichloropropene	1.0	0.59	ug/L	8260C
Dibromochloromethane	1.0	0.84	ug/L	8260C
Ethylbenzene	1.0	0.51	ug/L	8260C
Methyl tert-butyl ether	1.0	0.59	ug/L	8260C
Methylene Chloride	1.0	0.36	ug/L	8260C
Styrene	1.0	0.47	ug/L	8260C
Tetrachloroethene	1.0	0.47	ug/L	8260C
Toluene	1.0	0.46	ug/L	8260C
trans-1,2-Dichloroethene	1.0	0.67	ug/L	8260C
trans-1,3-Dichloropropene	1.0	0.58	ug/L	8260C
Trichloroethene	1.0	0.69	ug/L	8260C
Vinyl chloride	1.0	0.88	ug/L	8260C
Xylenes, Total	2.0	0.89	ug/L	8260C

# Surrogate Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (65-121)	TOL (73-120)	BFB (80-120)	DBFM (73-120)
180-71467-1	HD-MW-103D-0/1-0	109	88	90	102
180-71467-2	HD-MW-103S-0/1-0	110	92	89	103
180-71467-3	HD-MW-102D-0/1-0	108	86	83	104
180-71467-4	HD-MW-102S-0/1-0	109	92	90	107
180-71467-4 MS	HD-MW-102S-0/1-0	92	90	91	85
180-71467-4 MSD	HD-MW-102S-0/1-0	95	107	103	95
180-71467-5	HD-RW-2-0/1-0	111	88	87	105
180-71467-6	HD-MW-57-0/1-0	114	90	86	105
180-71467-7	HD-QC1-0/1-2	114	90	86	110
180-71467-8	HD-QC1-0/1-1	112	91	88	105
180-71467-9	HD-QC1-0/1-3	113	90	90	109
180-71467-10	HD-QC1-0/1-4	118	90	86	113
LCS 180-226849/3	Lab Control Sample	95	94	90	87
LCS 180-227010/3	Lab Control Sample	93	95	93	90
MB 180-226849/5	Method Blank	110	92	92	102
MB 180-227010/5	Method Blank	109	94	92	105

### Surrogate Legend

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

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

# QC Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Lab Sample ID: MB 180-226849/5**

**Matrix: Water**

**Analysis Batch: 226849**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloromethane	1.0	U	1.0	0.90	ug/L			10/25/17 01:02	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/25/17 01:02	1
Bromomethane	1.0	U	1.0	0.89	ug/L			10/25/17 01:02	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/25/17 01:02	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/25/17 01:02	1
Acetone	5.0	U	5.0	3.4	ug/L			10/25/17 01:02	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/25/17 01:02	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/25/17 01:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/25/17 01:02	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/25/17 01:02	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/25/17 01:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.71	ug/L			10/25/17 01:02	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/25/17 01:02	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/25/17 01:02	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/25/17 01:02	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 01:02	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/25/17 01:02	1
Benzene	1.0	U	1.0	0.60	ug/L			10/25/17 01:02	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 01:02	1
Trichloroethene	1.0	U	1.0	0.69	ug/L			10/25/17 01:02	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/25/17 01:02	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/25/17 01:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/25/17 01:02	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/25/17 01:02	1
Toluene	1.0	U	1.0	0.46	ug/L			10/25/17 01:02	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/25/17 01:02	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/25/17 01:02	1
Tetrachloroethene	1.0	U	1.0	0.47	ug/L			10/25/17 01:02	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/25/17 01:02	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/25/17 01:02	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/25/17 01:02	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/25/17 01:02	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 01:02	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/25/17 01:02	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/25/17 01:02	1
Styrene	1.0	U	1.0	0.47	ug/L			10/25/17 01:02	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/25/17 01:02	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 01:02	1
Acrylonitrile	20	U	20	7.8	ug/L			10/25/17 01:02	1
1,4-Dioxane	200	U	200	14	ug/L			10/25/17 01:02	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	110		65 - 121		10/25/17 01:02	1
Toluene-d8 (Surr)	92		73 - 120		10/25/17 01:02	1
4-Bromofluorobenzene (Surr)	92		80 - 120		10/25/17 01:02	1
Dibromofluoromethane (Surr)	102		73 - 120		10/25/17 01:02	1

# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Lab Sample ID: LCS 180-226849/3**

**Matrix: Water**

**Analysis Batch: 226849**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	12.2		ug/L		122	49 - 135
Vinyl chloride	10.0	9.94		ug/L		99	52 - 136
Bromomethane	10.0	7.76		ug/L		78	37 - 150
Chloroethane	10.0	9.73		ug/L		97	44 - 139
1,1-Dichloroethene	10.0	9.89		ug/L		99	64 - 131
Acetone	20.0	23.2		ug/L		116	24 - 150
Carbon disulfide	10.0	9.22		ug/L		92	20 - 150
Methylene Chloride	10.0	9.49		ug/L		95	66 - 123
trans-1,2-Dichloroethene	10.0	9.15		ug/L		92	70 - 123
Methyl tert-butyl ether	10.0	9.12		ug/L		91	66 - 130
1,1-Dichloroethane	10.0	9.88		ug/L		99	66 - 122
cis-1,2-Dichloroethene	10.0	9.10		ug/L		91	73 - 120
Bromochloromethane	10.0	9.60		ug/L		96	73 - 122
2-Butanone (MEK)	20.0	22.5		ug/L		113	37 - 150
Chloroform	10.0	8.99		ug/L		90	72 - 123
1,1,1-Trichloroethane	10.0	9.32		ug/L		93	66 - 129
Carbon tetrachloride	10.0	9.38		ug/L		94	58 - 145
Benzene	10.0	8.81		ug/L		88	75 - 123
1,2-Dichloroethane	10.0	10.3		ug/L		103	63 - 130
Trichloroethene	10.0	8.68		ug/L		87	74 - 121
1,2-Dichloropropane	10.0	9.32		ug/L		93	67 - 119
Bromodichloromethane	10.0	8.39		ug/L		84	62 - 127
cis-1,3-Dichloropropene	10.0	8.34		ug/L		83	61 - 127
4-Methyl-2-pentanone (MIBK)	20.0	20.5		ug/L		103	41 - 135
Toluene	10.0	9.25		ug/L		92	76 - 129
trans-1,3-Dichloropropene	10.0	9.10		ug/L		91	61 - 136
1,1,2-Trichloroethane	10.0	9.51		ug/L		95	74 - 126
Tetrachloroethene	10.0	8.59		ug/L		86	76 - 128
2-Hexanone	20.0	19.6		ug/L		98	37 - 150
Dibromochloromethane	10.0	9.26		ug/L		93	63 - 131
1,2-Dibromoethane (EDB)	10.0	9.05		ug/L		90	76 - 128
Chlorobenzene	10.0	8.99		ug/L		90	79 - 124
1,1,1,2-Tetrachloroethane	10.0	9.19		ug/L		92	70 - 130
Ethylbenzene	10.0	8.74		ug/L		87	77 - 124
Xylenes, Total	20.0	17.7		ug/L		89	76 - 124
Styrene	10.0	9.01		ug/L		90	80 - 125
Bromoform	10.0	8.13		ug/L		81	54 - 136
1,1,2,2-Tetrachloroethane	10.0	8.90		ug/L		89	72 - 128
Acrylonitrile	100	109		ug/L		109	60 - 130
1,4-Dioxane	200	192	J	ug/L		96	26 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		65 - 121
Toluene-d8 (Surr)	94		73 - 120
4-Bromofluorobenzene (Surr)	90		80 - 120
Dibromofluoromethane (Surr)	87		73 - 120

# QC Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Lab Sample ID: MB 180-227010/5**

**Matrix: Water**

**Analysis Batch: 227010**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.90	ug/L			10/25/17 23:51	1
Vinyl chloride	1.0	U	1.0	0.88	ug/L			10/25/17 23:51	1
Bromomethane	1.0	U	1.0	0.89	ug/L			10/25/17 23:51	1
Chloroethane	1.0	U	1.0	0.90	ug/L			10/25/17 23:51	1
1,1-Dichloroethene	1.0	U	1.0	0.55	ug/L			10/25/17 23:51	1
Acetone	5.0	U	5.0	3.4	ug/L			10/25/17 23:51	1
Carbon disulfide	1.0	U	1.0	0.88	ug/L			10/25/17 23:51	1
Methylene Chloride	1.0	U	1.0	0.36	ug/L			10/25/17 23:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.67	ug/L			10/25/17 23:51	1
Methyl tert-butyl ether	1.0	U	1.0	0.59	ug/L			10/25/17 23:51	1
1,1-Dichloroethane	1.0	U	1.0	0.63	ug/L			10/25/17 23:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.71	ug/L			10/25/17 23:51	1
Bromochloromethane	1.0	U	1.0	0.63	ug/L			10/25/17 23:51	1
2-Butanone (MEK)	5.0	U	5.0	2.6	ug/L			10/25/17 23:51	1
Chloroform	1.0	U	1.0	0.60	ug/L			10/25/17 23:51	1
1,1,1-Trichloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 23:51	1
Carbon tetrachloride	1.0	U	1.0	0.88	ug/L			10/25/17 23:51	1
Benzene	1.0	U	1.0	0.60	ug/L			10/25/17 23:51	1
1,2-Dichloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 23:51	1
Trichloroethene	1.0	U	1.0	0.69	ug/L			10/25/17 23:51	1
1,2-Dichloropropane	1.0	U	1.0	0.66	ug/L			10/25/17 23:51	1
Bromodichloromethane	1.0	U	1.0	0.64	ug/L			10/25/17 23:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.59	ug/L			10/25/17 23:51	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1	ug/L			10/25/17 23:51	1
Toluene	1.0	U	1.0	0.46	ug/L			10/25/17 23:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.58	ug/L			10/25/17 23:51	1
1,1,2-Trichloroethane	1.0	U	1.0	0.45	ug/L			10/25/17 23:51	1
Tetrachloroethene	1.0	U	1.0	0.47	ug/L			10/25/17 23:51	1
2-Hexanone	5.0	U	5.0	3.3	ug/L			10/25/17 23:51	1
Dibromochloromethane	1.0	U	1.0	0.84	ug/L			10/25/17 23:51	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50	ug/L			10/25/17 23:51	1
Chlorobenzene	1.0	U	1.0	0.50	ug/L			10/25/17 23:51	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57	ug/L			10/25/17 23:51	1
Ethylbenzene	1.0	U	1.0	0.51	ug/L			10/25/17 23:51	1
Xylenes, Total	2.0	U	2.0	0.89	ug/L			10/25/17 23:51	1
Styrene	1.0	U	1.0	0.47	ug/L			10/25/17 23:51	1
Bromoform	1.0	U	1.0	0.98	ug/L			10/25/17 23:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			10/25/17 23:51	1
Acrylonitrile	20	U	20	7.8	ug/L			10/25/17 23:51	1
1,4-Dioxane	200	U	200	14	ug/L			10/25/17 23:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		65 - 121		10/25/17 23:51	1
Toluene-d8 (Surr)	94		73 - 120		10/25/17 23:51	1
4-Bromofluorobenzene (Surr)	92		80 - 120		10/25/17 23:51	1
Dibromofluoromethane (Surr)	105		73 - 120		10/25/17 23:51	1

TestAmerica Pittsburgh

# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Lab Sample ID: LCS 180-227010/3**

**Matrix: Water**

**Analysis Batch: 227010**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	13.7	*	ug/L		137	49 - 135
Vinyl chloride	10.0	10.6		ug/L		106	52 - 136
Bromomethane	10.0	6.88		ug/L		69	37 - 150
Chloroethane	10.0	9.57		ug/L		96	44 - 139
1,1-Dichloroethene	10.0	10.2		ug/L		102	64 - 131
Acetone	20.0	26.4		ug/L		132	24 - 150
Carbon disulfide	10.0	10.0		ug/L		100	20 - 150
Methylene Chloride	10.0	9.78		ug/L		98	66 - 123
trans-1,2-Dichloroethene	10.0	10.0		ug/L		100	70 - 123
Methyl tert-butyl ether	10.0	9.29		ug/L		93	66 - 130
1,1-Dichloroethane	10.0	10.2		ug/L		102	66 - 122
cis-1,2-Dichloroethene	10.0	9.49		ug/L		95	73 - 120
Bromochloromethane	10.0	9.54		ug/L		95	73 - 122
2-Butanone (MEK)	20.0	23.5		ug/L		117	37 - 150
Chloroform	10.0	9.19		ug/L		92	72 - 123
1,1,1-Trichloroethane	10.0	9.70		ug/L		97	66 - 129
Carbon tetrachloride	10.0	9.92		ug/L		99	58 - 145
Benzene	10.0	9.20		ug/L		92	75 - 123
1,2-Dichloroethane	10.0	10.1		ug/L		101	63 - 130
Trichloroethene	10.0	8.92		ug/L		89	74 - 121
1,2-Dichloropropane	10.0	9.45		ug/L		95	67 - 119
Bromodichloromethane	10.0	8.92		ug/L		89	62 - 127
cis-1,3-Dichloropropene	10.0	8.58		ug/L		86	61 - 127
4-Methyl-2-pentanone (MIBK)	20.0	22.0		ug/L		110	41 - 135
Toluene	10.0	9.90		ug/L		99	76 - 129
trans-1,3-Dichloropropene	10.0	9.64		ug/L		96	61 - 136
1,1,2-Trichloroethane	10.0	9.41		ug/L		94	74 - 126
Tetrachloroethene	10.0	9.21		ug/L		92	76 - 128
2-Hexanone	20.0	21.8		ug/L		109	37 - 150
Dibromochloromethane	10.0	9.57		ug/L		96	63 - 131
1,2-Dibromoethane (EDB)	10.0	9.35		ug/L		94	76 - 128
Chlorobenzene	10.0	9.41		ug/L		94	79 - 124
1,1,1,2-Tetrachloroethane	10.0	9.79		ug/L		98	70 - 130
Ethylbenzene	10.0	9.66		ug/L		97	77 - 124
Xylenes, Total	20.0	19.0		ug/L		95	76 - 124
Styrene	10.0	9.79		ug/L		98	80 - 125
Bromoform	10.0	8.10		ug/L		81	54 - 136
1,1,2,2-Tetrachloroethane	10.0	8.53		ug/L		85	72 - 128
Acrylonitrile	100	106		ug/L		106	60 - 130
1,4-Dioxane	200	190	J	ug/L		95	26 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		65 - 121
Toluene-d8 (Surr)	95		73 - 120
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	90		73 - 120

# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Lab Sample ID: 180-71467-4 MS**

**Matrix: Water**

**Analysis Batch: 227010**

**Client Sample ID: HD-MW-102S-0/1-0**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chloromethane	1.0	U * F1	10.0	13.6	F1	ug/L		136		49 - 135
Vinyl chloride	1.0	U	10.0	11.4		ug/L		114		52 - 136
Bromomethane	1.0	U ^c	10.0	8.45		ug/L		84		37 - 150
Chloroethane	1.0	U	10.0	10.1		ug/L		101		44 - 139
1,1-Dichloroethene	4.6		10.0	14.1		ug/L		95		64 - 131
Acetone	5.0	U F1 F2	20.0	58.7	F1	ug/L		294		24 - 150
Carbon disulfide	1.0	U	10.0	10.1		ug/L		101		20 - 150
Methylene Chloride	1.0	U	10.0	9.53		ug/L		95		66 - 123
trans-1,2-Dichloroethene	1.0	U	10.0	9.89		ug/L		99		70 - 123
Methyl tert-butyl ether	1.0	U	10.0	9.34		ug/L		93		66 - 130
1,1-Dichloroethane	1.2		10.0	11.3		ug/L		100		66 - 122
cis-1,2-Dichloroethene	6.0		10.0	15.3		ug/L		92		73 - 120
Bromochloromethane	1.0	U	10.0	9.90		ug/L		99		73 - 122
2-Butanone (MEK)	5.0	U	20.0	20.2		ug/L		101		37 - 150
Chloroform	1.0	U	10.0	9.37		ug/L		94		72 - 123
1,1,1-Trichloroethane	4.6		10.0	14.2		ug/L		95		66 - 129
Carbon tetrachloride	1.0	U	10.0	10.4		ug/L		104		58 - 145
Benzene	1.0	U	10.0	9.43		ug/L		94		75 - 123
1,2-Dichloroethane	1.0	U	10.0	10.3		ug/L		103		63 - 130
Trichloroethene	24	F1	10.0	28.0	F1	ug/L		40		74 - 121
1,2-Dichloropropane	1.0	U	10.0	9.54		ug/L		95		67 - 119
Bromodichloromethane	1.0	U	10.0	8.75		ug/L		87		62 - 127
cis-1,3-Dichloropropene	1.0	U	10.0	8.51		ug/L		85		61 - 127
4-Methyl-2-pentanone (MIBK)	5.0	U	20.0	21.5		ug/L		107		41 - 135
Toluene	1.0	U	10.0	10.3		ug/L		103		76 - 129
trans-1,3-Dichloropropene	1.0	U	10.0	9.83		ug/L		98		61 - 136
1,1,2-Trichloroethane	1.0	U	10.0	9.71		ug/L		97		74 - 126
Tetrachloroethene	13		10.0	21.5		ug/L		88		76 - 128
2-Hexanone	5.0	U	20.0	19.3		ug/L		97		37 - 150
Dibromochloromethane	1.0	U	10.0	9.80		ug/L		98		63 - 131
1,2-Dibromoethane (EDB)	1.0	U	10.0	9.24		ug/L		92		76 - 128
Chlorobenzene	1.0	U	10.0	9.96		ug/L		100		79 - 124
1,1,1,2-Tetrachloroethane	1.0	U	10.0	10.2		ug/L		102		70 - 130
Ethylbenzene	1.0	U	10.0	9.78		ug/L		98		77 - 124
Xylenes, Total	2.0	U	20.0	19.8		ug/L		99		76 - 124
Styrene	1.0	U	10.0	9.94		ug/L		99		80 - 125
Bromoform	1.0	U	10.0	8.95		ug/L		90		54 - 136
1,1,2,2-Tetrachloroethane	1.0	U	10.0	9.04		ug/L		90		72 - 128
Acrylonitrile	20	U	100	109		ug/L		109		60 - 130
1,4-Dioxane	200	U	200	192	J	ug/L		96		26 - 150
		<b>MS MS</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
1,2-Dichloroethane-d4 (Surr)	92		65 - 121							
Toluene-d8 (Surr)	90		73 - 120							
4-Bromofluorobenzene (Surr)	91		80 - 120							
Dibromofluoromethane (Surr)	85		73 - 120							



# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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

**Lab Sample ID: 180-71467-4 MSD**

**Matrix: Water**

**Analysis Batch: 227010**

**Client Sample ID: HD-MW-102S-0/1-0**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Chloromethane	1.0	U * F1	10.0	13.0		ug/L		130	49 - 135	5	20
Vinyl chloride	1.0	U	10.0	10.9		ug/L		109	52 - 136	4	19
Bromomethane	1.0	U ^c	10.0	8.46		ug/L		85	37 - 150	0	23
Chloroethane	1.0	U	10.0	10.4		ug/L		104	44 - 139	2	19
1,1-Dichloroethene	4.6		10.0	14.4		ug/L		98	64 - 131	2	20
Acetone	5.0	U F1 F2	20.0	34.3	F1 F2	ug/L		172	24 - 150	52	35
Carbon disulfide	1.0	U	10.0	10.3		ug/L		103	20 - 150	2	21
Methylene Chloride	1.0	U	10.0	9.60		ug/L		96	66 - 123	1	22
trans-1,2-Dichloroethene	1.0	U	10.0	9.95		ug/L		100	70 - 123	1	19
Methyl tert-butyl ether	1.0	U	10.0	9.22		ug/L		92	66 - 130	1	23
1,1-Dichloroethane	1.2		10.0	11.4		ug/L		102	66 - 122	2	20
cis-1,2-Dichloroethene	6.0		10.0	15.0		ug/L		90	73 - 120	1	23
Bromochloromethane	1.0	U	10.0	9.08		ug/L		91	73 - 122	9	24
2-Butanone (MEK)	5.0	U	20.0	18.1		ug/L		91	37 - 150	11	35
Chloroform	1.0	U	10.0	9.28		ug/L		93	72 - 123	1	20
1,1,1-Trichloroethane	4.6		10.0	13.9		ug/L		92	66 - 129	2	21
Carbon tetrachloride	1.0	U	10.0	10.5		ug/L		105	58 - 145	1	22
Benzene	1.0	U	10.0	9.19		ug/L		92	75 - 123	3	20
1,2-Dichloroethane	1.0	U	10.0	10.0		ug/L		100	63 - 130	3	21
Trichloroethene	24	F1	10.0	27.6	F1	ug/L		36	74 - 121	1	20
1,2-Dichloropropane	1.0	U	10.0	9.21		ug/L		92	67 - 119	4	21
Bromodichloromethane	1.0	U	10.0	8.48		ug/L		85	62 - 127	3	19
cis-1,3-Dichloropropene	1.0	U	10.0	8.03		ug/L		80	61 - 127	6	22
4-Methyl-2-pentanone (MIBK)	5.0	U	20.0	21.3		ug/L		106	41 - 135	1	35
Toluene	1.0	U	10.0	10.4		ug/L		104	76 - 129	0	18
trans-1,3-Dichloropropene	1.0	U	10.0	10.1		ug/L		101	61 - 136	3	17
1,1,2-Trichloroethane	1.0	U	10.0	9.79		ug/L		98	74 - 126	1	20
Tetrachloroethene	13		10.0	21.8		ug/L		92	76 - 128	2	20
2-Hexanone	5.0	U	20.0	20.1		ug/L		101	37 - 150	4	35
Dibromochloromethane	1.0	U	10.0	10.1		ug/L		101	63 - 131	3	20
1,2-Dibromoethane (EDB)	1.0	U	10.0	9.51		ug/L		95	76 - 128	3	21
Chlorobenzene	1.0	U	10.0	10.2		ug/L		102	79 - 124	3	16
1,1,1,2-Tetrachloroethane	1.0	U	10.0	10.4		ug/L		104	70 - 130	2	17
Ethylbenzene	1.0	U	10.0	10.0		ug/L		100	77 - 124	3	16
Xylenes, Total	2.0	U	20.0	20.5		ug/L		103	76 - 124	4	17
Styrene	1.0	U	10.0	9.92		ug/L		99	80 - 125	0	18
Bromoform	1.0	U	10.0	8.64		ug/L		86	54 - 136	4	23
1,1,2,2-Tetrachloroethane	1.0	U	10.0	9.13		ug/L		91	72 - 128	1	24
Acrylonitrile	20	U	100	102		ug/L		102	60 - 130	6	32
1,4-Dioxane	200	U	200	171	J	ug/L		85	26 - 150	11	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	95		65 - 121
Toluene-d8 (Surr)	107		73 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	95		73 - 120

# QC Association Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

## GC/MS VOA

### Analysis Batch: 226849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-71467-2	HD-MW-103S-0/1-0	Total/NA	Water	8260C	
180-71467-5	HD-RW-2-0/1-0	Total/NA	Water	8260C	
180-71467-6	HD-MW-57-0/1-0	Total/NA	Water	8260C	
180-71467-7	HD-QC1-0/1-2	Total/NA	Water	8260C	
MB 180-226849/5	Method Blank	Total/NA	Water	8260C	
LCS 180-226849/3	Lab Control Sample	Total/NA	Water	8260C	

### Analysis Batch: 227010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-71467-1	HD-MW-103D-0/1-0	Total/NA	Water	8260C	
180-71467-3	HD-MW-102D-0/1-0	Total/NA	Water	8260C	
180-71467-4	HD-MW-102S-0/1-0	Total/NA	Water	8260C	
180-71467-8	HD-QC1-0/1-1	Total/NA	Water	8260C	
180-71467-9	HD-QC1-0/1-3	Total/NA	Water	8260C	
180-71467-10	HD-QC1-0/1-4	Total/NA	Water	8260C	
MB 180-227010/5	Method Blank	Total/NA	Water	8260C	
LCS 180-227010/3	Lab Control Sample	Total/NA	Water	8260C	
180-71467-4 MS	HD-MW-102S-0/1-0	Total/NA	Water	8260C	
180-71467-4 MSD	HD-MW-102S-0/1-0	Total/NA	Water	8260C	

# Lab Chronicle

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

**Client Sample ID: HD-MW-103D-0/1-0**

**Date Collected: 10/16/17 14:10**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-1**

**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	8260C		1	5 mL	5 mL	227010	10/26/17 02:08	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-MW-103S-0/1-0**

**Date Collected: 10/16/17 11:57**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-2**

**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	8260C		5	5 mL	5 mL	226849	10/25/17 08:03	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-MW-102D-0/1-0**

**Date Collected: 10/17/17 11:45**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-3**

**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	8260C		1	5 mL	5 mL	227010	10/26/17 02:31	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-MW-102S-0/1-0**

**Date Collected: 10/17/17 14:08**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-4**

**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	8260C		1	5 mL	5 mL	227010	10/26/17 00:27	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-RW-2-0/1-0**

**Date Collected: 10/17/17 13:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-5**

**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	8260C		1	5 mL	5 mL	226849	10/25/17 09:15	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-MW-57-0/1-0**

**Date Collected: 10/17/17 14:15**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-6**

**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	8260C		1	5 mL	5 mL	226849	10/25/17 09:39	FBB	TAL PIT
Instrument ID: CHHP5										

TestAmerica Pittsburgh

# Lab Chronicle

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

**Client Sample ID: HD-QC1-0/1-2**

**Date Collected: 10/17/17 12:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-7**

**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	8260C		1	5 mL	5 mL	226849	10/25/17 10:03	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-QC1-0/1-1**

**Date Collected: 10/17/17 08:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-8**

**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	8260C		1	5 mL	5 mL	227010	10/26/17 02:55	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-QC1-0/1-3**

**Date Collected: 10/17/17 13:10**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-9**

**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	8260C		1	5 mL	5 mL	227010	10/26/17 03:19	FBB	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-QC1-0/1-4**

**Date Collected: 10/17/17 13:00**

**Date Received: 10/18/17 09:10**

**Lab Sample ID: 180-71467-10**

**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	8260C		1	5 mL	5 mL	227010	10/26/17 03:43	FBB	TAL PIT
Instrument ID: CHHP5										

#### Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

#### Analyst References:

Lab: TAL PIT

Batch Type: Analysis

FBB = Frank Bungard

# Accreditation/Certification Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

## Laboratory: TestAmerica Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-18

# Method Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT

**Protocol References:**

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

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Sample Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-71467-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-71467-1	HD-MW-103D-0/1-0	Water	10/16/17 14:10	10/18/17 09:10
180-71467-2	HD-MW-103S-0/1-0	Water	10/16/17 11:57	10/18/17 09:10
180-71467-3	HD-MW-102D-0/1-0	Water	10/17/17 11:45	10/18/17 09:10
180-71467-4	HD-MW-102S-0/1-0	Water	10/17/17 14:08	10/18/17 09:10
180-71467-5	HD-RW-2-0/1-0	Water	10/17/17 13:00	10/18/17 09:10
180-71467-6	HD-MW-57-0/1-0	Water	10/17/17 14:15	10/18/17 09:10
180-71467-7	HD-QC1-0/1-2	Water	10/17/17 12:00	10/18/17 09:10
180-71467-8	HD-QC1-0/1-1	Water	10/17/17 08:00	10/18/17 09:10
180-71467-9	HD-QC1-0/1-3	Water	10/17/17 13:10	10/18/17 09:10
180-71467-10	HD-QC1-0/1-4	Water	10/17/17 13:00	10/18/17 09:10

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 Analysis Batch Number: 218218Lab Sample ID: IC 180-218218/2 Client Sample ID: \_\_\_\_\_Date Analyzed: 07/27/17 00:51 Lab File ID: 50727D02.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.76	Poor chromatography	bungardf	07/27/17 03:06

Lab Sample ID: IC 180-218218/3 Client Sample ID: \_\_\_\_\_Date Analyzed: 07/27/17 01:15 Lab File ID: 50727D03.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.75	Poor chromatography	bungardf	07/27/17 03:13
1,4-Dioxane	8.05	Poor chromatography	bungardf	07/27/17 03:14

Lab Sample ID: ICIS 180-218218/4 Client Sample ID: \_\_\_\_\_Date Analyzed: 07/27/17 01:39 Lab File ID: 50727D04.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.75	Poor chromatography	bungardf	07/27/17 03:15
1,4-Dioxane	8.05	Poor chromatography	bungardf	07/27/17 03:15



GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 Analysis Batch Number: 226849

Lab Sample ID: 180-71467-5 Client Sample ID: HD-RW-2-0/1-0

Date Analyzed: 10/25/17 09:15 Lab File ID: 51024D25.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toluene	9.06	Poor chromatography	bungardf	10/25/17 20:44

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 Analysis Batch Number: 227010Lab Sample ID: CCVIS 180-227010/2 Client Sample ID: \_\_\_\_\_Date Analyzed: 10/25/17 22:12 Lab File ID: 51025D02.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	2.34	Poor chromatography	bungardf	10/25/17 22:47
Trichlorofluoromethane	2.79	Poor chromatography	bungardf	10/25/17 22:46

Lab Sample ID: 180-71467-8 Client Sample ID: HD-QC1-0/1-1Date Analyzed: 10/26/17 02:55 Lab File ID: 51025D12.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.44	Poor chromatography	bungardf	10/26/17 03:18

Lab Sample ID: 180-71467-10 Client Sample ID: HD-QC1-0/1-4Date Analyzed: 10/26/17 03:43 Lab File ID: 51025D14.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylbenzene	10.56	Poor chromatography	bungardf	10/26/17 04:53

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
VOA8260INT_00072	08/21/17	07/21/17	Methanol, Lot 2019055	10 mL	VOA8260INTRES_00123	1 mL	1,4-Dichlorobenzene-d4	25 ug/mL
							Chlorobenzene-d5	25 ug/mL
							Fluorobenzene (IS)	25 ug/mL
							TBA-d9 (IS)	500 ug/mL
.VOA8260INTRES_00123	08/31/20		Restek, Lot A0113246		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
VOA8260INT_00075	11/20/17	10/20/17	Methanol, Lot 2469125	10 mL	VOA8260INTRES_00136	1 mL	1,4-Dichlorobenzene-d4	25 ug/mL
							Chlorobenzene-d5	25 ug/mL
							Fluorobenzene (IS)	25 ug/mL
							TBA-d9 (IS)	500 ug/mL
.VOA8260INTRES_00136	01/31/22		Restek, Lot A0124343		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
VOA8260SURR_00071	08/21/17	07/21/17	Methanol, Lot 2019055	100 mL	VOA8260SURRES_00118	1 mL	1,2-Dichloroethane-d4 (Surr)	25 ug/mL
							4-Bromofluorobenzene (Surr)	25 ug/mL
							Dibromofluoromethane (Surr)	25 ug/mL
							Toluene-d8 (Surr)	25 ug/mL
.VOA8260SURRES_00118	10/31/20		Restek, Lot A0114901		(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
VOA8260SURR_00074	11/20/17	10/20/17	Methanol, Lot 2469125	100 mL	VOA8260SURRES_00120	1 mL	1,2-Dichloroethane-d4 (Surr)	25 ug/mL
							4-Bromofluorobenzene (Surr)	25 ug/mL
							Dibromofluoromethane (Surr)	25 ug/mL
							Toluene-d8 (Surr)	25 ug/mL
.VOA8260SURRES_00120	10/31/20		Restek, Lot A0114901		(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
VOA8260VOAPRI_00263	07/29/17	07/22/17	Methanol, Lot 2019055	10 mL	VOA8260GAS1ST_00203	0.1 mL	Bromomethane	25 ug/mL
							Butadiene	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Dichlorodifluoromethane	25 ug/mL
							Trichlorofluoromethane	25 ug/mL
					VOA8260VOAPRI_00260	1 mL	Vinyl chloride	25 ug/mL
							2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
							1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
1,1,2,2-Tetrachloroethane	25 ug/mL							

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-Trichloro-1,2,2-trifluoroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,1-Dichloropropene	25 ug/mL
							1,2,3-Trichlorobenzene	25 ug/mL
							1,2,3-Trichloropropane	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2,4-Trimethylbenzene	25 ug/mL
							1,2-Dibromo-3-Chloropropane	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,3,5-Trimethylbenzene	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dichloropropane	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL
							1,4-Dioxane	500 ug/mL
							2,2-Dichloropropane	25 ug/mL
							2-Chlorotoluene	25 ug/mL
							2-Methyl-2-propanol	250 ug/mL
							3-Chloro-1-propene	25 ug/mL
							4-Chlorotoluene	25 ug/mL
							4-Isopropyltoluene	25 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromobenzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Cyclohexane	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Dibromomethane	25 ug/mL
							Ethyl ether	25 ug/mL
							Ethyl methacrylate	25 ug/mL
							Ethylbenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexane	25 ug/mL
							Iodomethane	25 ug/mL
							Isobutyl alcohol	625 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isopropylbenzene	25 ug/mL
							m-Xylene & p-Xylene	25 ug/mL
							Methyl acetate	50 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylcyclohexane	25 ug/mL
							Methylene Chloride	25 ug/mL
							n-Butylbenzene	25 ug/mL
							n-Heptane	25 ug/mL
							N-Propylbenzene	25 ug/mL
							Naphthalene	25 ug/mL
							o-Xylene	25 ug/mL
							sec-Butylbenzene	25 ug/mL
							Styrene	25 ug/mL
							tert-Butylbenzene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Tetrahydrofuran	50 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							trans-1,4-Dichloro-2-butene	25 ug/mL
							Trichloroethene	25 ug/mL
.VOA8260GAS1ST_00203	01/31/20		Restek, Lot A0124278			(Purchased Reagent)	Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00260	08/06/17	07/06/17	Methanol, Lot 2019056	10 mL	VOA8260KET1ST_00100	0.2 mL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOA8260MEGA1_00065	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,1-Dichloropropene	250 ug/mL
							1,2,3-Trichlorobenzene	250 ug/mL
							1,2,3-Trichloropropane	250 ug/mL
							1,2,4-Trichlorobenzene	250 ug/mL
							1,2,4-Trimethylbenzene	250 ug/mL
							1,2-Dibromo-3-Chloropropane	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichlorobenzene	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							1,3,5-Trimethylbenzene	250 ug/mL
							1,3-Dichlorobenzene	250 ug/mL
							1,3-Dichloropropane	250 ug/mL
							1,4-Dichlorobenzene	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							2,2-Dichloropropane	250 ug/mL
							2-Chlorotoluene	250 ug/mL
							2-Methyl-2-propanol	2500 ug/mL
							3-Chloro-1-propene	250 ug/mL
							4-Chlorotoluene	250 ug/mL
							4-Isopropyltoluene	250 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromobenzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Cyclohexane	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Dibromomethane	250 ug/mL
							Ethyl ether	250 ug/mL
							Ethyl methacrylate	250 ug/mL
							Ethylbenzene	250 ug/mL
							Hexachlorobutadiene	250 ug/mL
							Hexane	250 ug/mL
							Iodomethane	250 ug/mL
							Isobutyl alcohol	6250 ug/mL
							Isopropylbenzene	250 ug/mL
							m-Xylene & p-Xylene	250 ug/mL
							Methyl acetate	500 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylcyclohexane	250 ug/mL
							Methylene Chloride	250 ug/mL
							n-Butylbenzene	250 ug/mL
							n-Heptane	250 ug/mL
							N-Propylbenzene	250 ug/mL
							Naphthalene	250 ug/mL
							o-Xylene	250 ug/mL
							sec-Butylbenzene	250 ug/mL
							Styrene	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							tert-Butylbenzene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Tetrahydrofuran	500 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL
							trans-1,4-Dichloro-2-butene	250 ug/mL
							Trichloroethene	250 ug/mL
..VOA8260KET1ST_00100	01/31/20		Restek, Lot A0123890			(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
..VOA8260MEGA1_00065	12/31/18		Restek, Lot A0123711			(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-trifluoroethane	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 (EDB)	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	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
							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
VOA8260VOAPRI_00268	10/30/17	10/23/17	Methanol, Lot 2469119	10 mL	VOA8260GAS1ST_00206	100 uL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00264	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,4-Dioxane	500 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Ethylbenzene	25 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylene Chloride	25 ug/mL
							Styrene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS1ST_00206	01/31/20		Restek, Lot A0124278			(Purchased Reagent)	Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00264	11/06/17	10/06/17	Methanol, Lot 2469120	10 mL	VOA8260MEGA1_00066	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Ethylbenzene	250 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylene Chloride	250 ug/mL
							Styrene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL
							Trichloroethene	250 ug/mL
							Xylenes, Total	500 ug/mL
..VOA8260MEGA1_00066	12/31/18		Restek, Lot A0123711		(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-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							Acrylonitrile	25000 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-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VOABFB25_00090							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tentatively Identified Compound	
							Total BTEX	
							Xylenes, Total	
.VOABFB50_00093	08/10/17	07/10/17	Methanol, Lot 2019056	50 mL	VOABFB50_00093	5 mL	BFB	25 ug/mL
..VOABFBRES_00058	11/30/21		Restek, Lot A0122647		VOABFBRES_00058	1 mL	BFB	50 ug/mL
						(Purchased Reagent)	BFB	2500 ug/mL
<b>VOABFB25_00094</b>							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Xylenes, Total	
.VOABFB50_00096	11/09/17	10/09/17	Methanol, Lot 2469125	50 mL	VOABFB50_00096	5 mL	BFB	25 ug/mL
..VOABFBRES_00055	11/30/21		Restek, Lot A0122647		VOABFBRES_00055	1 mL	BFB	50 ug/mL
						(Purchased Reagent)	BFB	2500 ug/mL
<b>voaW2clev1stR_00013</b>	07/31/17	07/24/17	Methanol, Lot 2019056	10 mL	VOACEVERES_00127	200 uL	2-Chloroethyl vinyl ether	50 ug/mL
.VOACEVERES_00127	01/31/20		Restek, Lot A0123891			(Purchased Reagent)	2-Chloroethyl vinyl ether	2500 ug/mL
<b>voaWAcrol1stRe_00016</b>	08/17/17	07/17/17	Methanol, Lot 2019056	100 mL	VOAACRORES_00115	0.125 mL	Acrolein	25 ug/mL
.VOAACRORES_00115	09/30/17		Restek, Lot A0125560			(Purchased Reagent)	Acrolein	20000 ug/mL
<b>voaWEEmix1stR_00009</b>	08/03/17	07/03/17	Methanol, Lot 127999	25 mL	VOARESEE1ST_00045	0.125 mL	1,2-dichloro-4-(trifluoromethyl)benzene	25 ug/mL
							2,3,6-Trichlorotoluene	25 ug/mL
							2,3- & 3,4- Dichlorotoluene	50 ug/mL
							2,4,5-Trichlorotoluene	25 ug/mL
							2,4- & 2,5- & 2,6-Dichlorotoluene	75 ug/mL
							2,4-Dichloro-1-(trifluoromethyl)-benzene	25 ug/mL
							2,5-Dichlorobenzotrifluoride	25 ug/mL
							2-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorotoluene	25 ug/mL
							4-Chlorobenzotrifluoride	25 ug/mL
.VOARESEE1ST_00045	01/31/18		Restek, Lot A0120234			(Purchased Reagent)	1,2-dichloro-4-(trifluoromethyl)benzene	5000 ug/mL
							2,3,6-Trichlorotoluene	5000 ug/mL
							2,3- & 3,4- Dichlorotoluene	10000 ug/mL
							2,4,5-Trichlorotoluene	5000 ug/mL
							2,4- & 2,5- & 2,6-Dichlorotoluene	15000 ug/mL
							2,4-Dichloro-1-(trifluoromethyl)-benzene	5000 ug/mL
							2,5-Dichlorobenzotrifluoride	5000 ug/mL
							2-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorotoluene	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorobenzotrifluoride	5000 ug/mL
<b>voaWKet2ndRes_00022</b>	11/16/17	10/16/17	Methanol, Lot 2469120	50 mL	VOA8260KET2ND_00103	0.1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET2ND_00103	03/31/19		Restek, Lot A0123880		(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
<b>voaWKetmix1st_00004</b>	07/29/17	06/29/17	Methanol, Lot 2019054	50 mL	VOA8260KET1ST_00099	0.1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00099	01/31/20		Restek, Lot A0123890		(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
<b>voaWKetmix1st_00006</b>	10/25/17	09/25/17	Methanol, Lot 2469119	50 mL	VOA8260KET1ST_00102	100 uL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00102	01/31/20		Restek, Lot A0123890		(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
<b>voaWVA1stRest_00017</b>	07/31/17	07/24/16	Methanol, Lot 2019067	25 mL	VOA8260VARES_00083	125 uL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00083	07/31/17		Restek, Lot A0124520		(Purchased Reagent)		Vinyl acetate	5000 ug/mL

Reagent

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**VOA8260GAS1ST\_00203**



# 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. : 569722 Lot No.: A0124278

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 : January 31, 2020 Storage: 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
			Value	Unit	Method	Notes
1	Dichlorodifluoromethane (CFC-12)	2,500.5 µg/mL	+/- 16.7232	µg/mL	Gravimetric	
	CAS # 75-71-8 (Lot Q167-08)		+/- 140.4412	µg/mL	Unstressed	
	Purity 99%		+/- 143.7161	µg/mL	Stressed	
2	Chloromethane (methyl chloride)	2,498.7 µg/mL	+/- 17.4998	µg/mL	Gravimetric	
	CAS # 74-87-3 (Lot SHBG7976V)		+/- 140.4406	µg/mL	Unstressed	
	Purity 99%		+/- 143.7111	µg/mL	Stressed	
3	Vinyl chloride	2,498.4 µg/mL	+/- 16.6753	µg/mL	Gravimetric	
	CAS # 75-01-4 (Lot 1026101231B1)		+/- 140.3203	µg/mL	Unstressed	
	Purity 99%		+/- 143.5926	µg/mL	Stressed	
4	1,3-Butadiene	2,496.9 µg/mL	+/- 17.0619	µg/mL	Gravimetric	
	CAS # 106-99-0 (Lot SHBF3387V)		+/- 140.2843	µg/mL	Unstressed	
	Purity 99%		+/- 143.5535	µg/mL	Stressed	
5	Bromomethane (methyl bromide)	2,500.5 µg/mL	+/- 17.3456	µg/mL	Gravimetric	
	CAS # 74-83-9 (Lot 101604)		+/- 140.5211	µg/mL	Unstressed	
	Purity 99%		+/- 143.7944	µg/mL	Stressed	
6	Chloroethane (ethyl chloride)	2,500.5 µg/mL	+/- 16.8189	µg/mL	Gravimetric	
	CAS # 75-00-3 (Lot 23593)		+/- 140.4526	µg/mL	Unstressed	
	Purity 99%		+/- 143.7272	µg/mL	Stressed	
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/- 10.0499	µg/mL	Gravimetric	
	CAS # 75-43-4 (Lot 4938100)		+/- 139.7786	µg/mL	Unstressed	
	Purity 99%		+/- 143.0675	µg/mL	Stressed	

8	Trichlorofluoromethane (CFC-11)	2,501.5	µg/mL	+/-	16.5404	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBG7531V)			+/-	140.4793	µg/mL	Unstressed
	Purity 99%			+/-	143.7562	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)

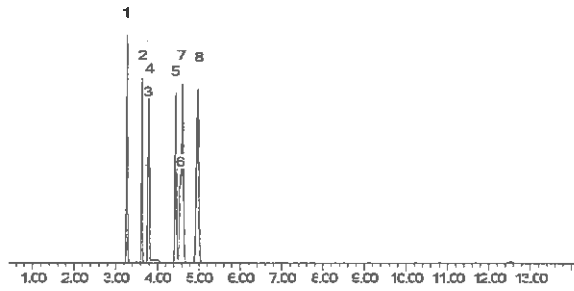
**Carrier Gas:**  
helium-constant flow 2.0 mL/min.

**Temp. Program:**  
40°C (hold 6 min.) to 100°C  
@ 6°C/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.

*Joseph Jaglowski*  
Joseph Jaglowski - Mix Technician

**Date Mixed:** 17-Jan-2017

**Balance:** 1125113331

*Jennifer J Pollino*  
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 24-Jan-2017

<p>Manufactured under Restek's ISO 9001:2008  Registered Quality System  Certificate #FM 80397</p>
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Reagent

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**VOA8260GAS1ST\_00206**





# CERTIFIED REFERENCE MATERIAL

110 Benner Circle  
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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. : 569722 Lot No.: A0124278

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 : January 31, 2020 Storage: 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
			Value	Unit	Method	Notes
1	Dichlorodifluoromethane (CFC-12)	2,500.5 µg/mL	+/-	16.7232	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q167-08)		+/-	140.4412	µg/mL	Unstressed
	Purity 99%		+/-	143.7161	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,498.7 µg/mL	+/-	17.4998	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBG7976V)		+/-	140.4406	µg/mL	Unstressed
	Purity 99%		+/-	143.7111	µg/mL	Stressed
3	Vinyl chloride	2,498.4 µg/mL	+/-	16.6753	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 1026101231B1)		+/-	140.3203	µg/mL	Unstressed
	Purity 99%		+/-	143.5926	µg/mL	Stressed
4	1,3-Butadiene	2,496.9 µg/mL	+/-	17.0619	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBF3387V)		+/-	140.2843	µg/mL	Unstressed
	Purity 99%		+/-	143.5535	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,500.5 µg/mL	+/-	17.3456	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	140.5211	µg/mL	Unstressed
	Purity 99%		+/-	143.7944	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,500.5 µg/mL	+/-	16.8189	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 23593)		+/-	140.4526	µg/mL	Unstressed
	Purity 99%		+/-	143.7272	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.0 µg/mL	+/-	10.0499	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot 4938100)		+/-	139.7786	µg/mL	Unstressed
	Purity 99%		+/-	143.0675	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)	2,501.5 $\mu\text{g/mL}$	+/-	16.5404	$\mu\text{g/mL}$	Gravimetric
	CAS # 75-69-4 (Lot SHBG7531V)		+/-	140.4793	$\mu\text{g/mL}$	Unstressed
	Purity 99%		+/-	143.7562	$\mu\text{g/mL}$	Stressed

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

**Column:**  
 60m x 0.25mm x 1.4 $\mu\text{m}$   
 Rtx-502.2 (cat.#10916)

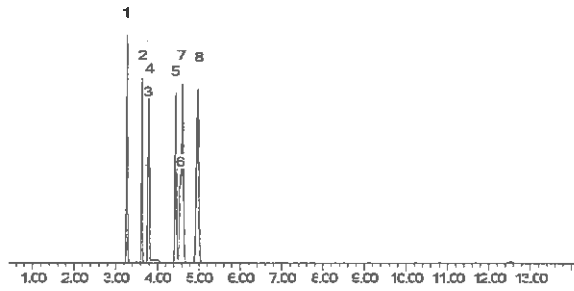
**Carrier Gas:**  
 helium-constant flow 2.0 mL/min.

**Temp. Program:**  
 40°C (hold 6 min.) to 100°C  
 @ 6°C/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.

*Joseph Jaglowski*  
 Joseph Jaglowski - Mix Technician

**Date Mixed:** 17-Jan-2017 **Balance:** 1125113331

*Jennifer J Pollino*  
 Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 24-Jan-2017

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

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**VOA8260INTRES\_00123**



# 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. : 568718 Lot No.: A0113246

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 : August 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	5,000.4 µg/mL	+/-	29.0712	µg/mL	Gravimetric
	CAS # 25725-11-5 (Lot I201P18)		+/-	106.0450	µg/mL	Unstressed
	Purity 99%		+/-	106.5155	µg/mL	Stressed
2	2-Butanone-d5	1,250.2 µg/mL	+/-	7.2688	µg/mL	Gravimetric
	CAS # 24313-50-6 (Lot M276P24)		+/-	26.5135	µg/mL	Unstressed
	Purity 99%		+/-	26.6311	µg/mL	Stressed
3	Fluorobenzene	250.2 µg/mL	+/-	1.4580	µg/mL	Gravimetric
	CAS # 462-06-6 (Lot BCBK8171V)		+/-	5.3070	µg/mL	Unstressed
	Purity 99%		+/-	5.3305	µg/mL	Stressed
4	1,4-Dioxane-d8	5,000.6 µg/mL	+/-	29.0727	µg/mL	Gravimetric
	CAS # 17647-74-4 (Lot I-19073)		+/-	106.0502	µg/mL	Unstressed
	Purity 98%		+/-	106.5208	µg/mL	Stressed
5	Chlorobenzene-d5	250.4 µg/mL	+/-	1.4592	µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-23926)		+/-	5.3113	µg/mL	Unstressed
	Purity 99%		+/-	5.3348	µg/mL	Stressed
6	1,4-Dichlorobenzene-d4	250.0 µg/mL	+/-	1.4569	µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/-	5.3028	µg/mL	Unstressed
	Purity 99%		+/-	5.3263	µg/mL	Stressed

Reagent

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**VOA8260INTRES\_00136**



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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. :** 568718 **Lot No.:** A0124343

**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 :** January 31, 2022 **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 Purity 99% (Lot I-201)	5,050.0 µg/mL	+/-	29.3596	µg/mL	Gravimetric
			+/-	108.1207	µg/mL	Unstressed
			+/-	111.2640	µg/mL	Stressed
2	2-Butanone-d5 CAS # 24313-50-6 Purity 99% (Lot M-276)	1,262.5 µg/mL	+/-	7.3403	µg/mL	Gravimetric
			+/-	27.0303	µg/mL	Unstressed
			+/-	27.8161	µg/mL	Stressed
3	Fluorobenzene CAS # 462-06-6 Purity 99% (Lot BCBK8171V)	251.6 µg/mL	+/-	1.4664	µg/mL	Gravimetric
			+/-	5.3884	µg/mL	Unstressed
			+/-	5.5450	µg/mL	Stressed
4	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99% (Lot I-19942)	5,048.8 µg/mL	+/-	29.3526	µg/mL	Gravimetric
			+/-	108.0950	µg/mL	Unstressed
			+/-	111.2375	µg/mL	Stressed
5	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99% (Lot PR-23926)	251.5 µg/mL	+/-	1.4654	µg/mL	Gravimetric
			+/-	5.3849	µg/mL	Unstressed
			+/-	5.5413	µg/mL	Stressed
6	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99% (Lot PR-18488)	252.5 µg/mL	+/-	1.4714	µg/mL	Gravimetric
			+/-	5.4070	µg/mL	Unstressed
			+/-	5.5641	µg/mL	Stressed

Reagent

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**VOA8260KET1ST\_00099**



# 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. :** 569721 **Lot No.:** A0123890  
**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 :** January 31, 2020 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)			
1	Acetone	12,517.5 µg/mL (Lot SHBH0922V)	+/-	72.7778	µg/mL	Gravimetric
	CAS # 67-64-1		+/-	755.2362	µg/mL	Unstressed
	Purity 99%		+/-	757.0293	µg/mL	Stressed
2	2-Butanone (MEK)	12,521.8 µg/mL (Lot SHBF2461V)	+/-	72.8025	µg/mL	Gravimetric
	CAS # 78-93-3		+/-	755.4927	µg/mL	Unstressed
	Purity 99%		+/-	757.2863	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,519.8 µg/mL (Lot SHBG3630V)	+/-	72.7909	µg/mL	Gravimetric
	CAS # 108-10-1		+/-	755.3720	µg/mL	Unstressed
	Purity 99%		+/-	757.1654	µg/mL	Stressed
4	2-Hexanone	12,508.5 µg/mL (Lot MKBW0198V)	+/-	72.7255	µg/mL	Gravimetric
	CAS # 591-78-6		+/-	754.6932	µg/mL	Unstressed
	Purity 99%		+/-	756.4850	µg/mL	Stressed

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



Reagent

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**VOA8260KET1ST\_00100**



# 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. :** 569721 **Lot No.:** A0123890

**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 :** January 31, 2020 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)			
1	Acetone	12,517.5 µg/mL (Lot SHBH0922V)	+/-	72.7778	µg/mL	Gravimetric
	CAS # 67-64-1		+/-	755.2362	µg/mL	Unstressed
	Purity 99%		+/-	757.0293	µg/mL	Stressed
2	2-Butanone (MEK)	12,521.8 µg/mL (Lot SHBF2461V)	+/-	72.8025	µg/mL	Gravimetric
	CAS # 78-93-3		+/-	755.4927	µg/mL	Unstressed
	Purity 99%		+/-	757.2863	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,519.8 µg/mL (Lot SHBG3630V)	+/-	72.7909	µg/mL	Gravimetric
	CAS # 108-10-1		+/-	755.3720	µg/mL	Unstressed
	Purity 99%		+/-	757.1654	µg/mL	Stressed
4	2-Hexanone	12,508.5 µg/mL (Lot MKBW0198V)	+/-	72.7255	µg/mL	Gravimetric
	CAS # 591-78-6		+/-	754.6932	µg/mL	Unstressed
	Purity 99%		+/-	756.4850	µg/mL	Stressed

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

Reagent

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**VOA8260KET1ST\_00102**



# CERTIFIED REFERENCE MATERIAL

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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. :** 569721 **Lot No.:** A0123890

**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 :** January 31, 2020 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,517.5 µg/mL	+/-	72.7778	µg/mL	Gravimetric
	CAS # 67-64-1 (Lot SHBH0922V)		+/-	755.2362	µg/mL	Unstressed
	Purity 99%		+/-	757.0293	µg/mL	Stressed
2	2-Butanone (MEK)	12,521.8 µg/mL	+/-	72.8025	µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBF2461V)		+/-	755.4927	µg/mL	Unstressed
	Purity 99%		+/-	757.2863	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,519.8 µg/mL	+/-	72.7909	µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBG3630V)		+/-	755.3720	µg/mL	Unstressed
	Purity 99%		+/-	757.1654	µg/mL	Stressed
4	2-Hexanone	12,508.5 µg/mL	+/-	72.7255	µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKBW0198V)		+/-	754.6932	µg/mL	Unstressed
	Purity 99%		+/-	756.4850	µg/mL	Stressed

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

Reagent

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**VOA8260KET2ND\_00103**



# 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. :** 569721.sec **Lot No.:** A0123880

**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 :** January 31, 2020 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,501.6 µg/mL	+/-	73.1996	µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/-	754.3267	µg/mL	Unstressed
	Purity 99%		+/-	756.1173	µg/mL	Stressed
2	2-Butanone (MEK)	12,503.6 µg/mL	+/-	73.2113	µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/-	754.4473	µg/mL	Unstressed
	Purity 99%		+/-	756.2383	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,506.0 µg/mL	+/-	73.2254	µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/-	754.5921	µg/mL	Unstressed
	Purity 99%		+/-	756.3834	µg/mL	Stressed
4	2-Hexanone	12,504.0 µg/mL	+/-	73.2137	µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot V3NRA)		+/-	754.4715	µg/mL	Unstressed
	Purity 99%		+/-	756.2625	µg/mL	Stressed

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

Reagent

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**VOA8260MEGA1\_00065**

# RESTEK 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. :** 571992 **Lot No.:** A0123711  
**Description :** 8260 List 1 / Std #1 MegaMix (2017)  
8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** December 31, 2018 **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 SHBG1462V) Purity 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL +/- 150.9115 µg/mL +/- 151.2698 µg/mL	Gravimetric Unstressed Stressed	
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 (Lot 00009482) Purity 99%	2,505.1 µg/mL	+/- 14.5650 µg/mL +/- 151.1453 µg/mL +/- 151.5041 µg/mL	Gravimetric Unstressed Stressed	
3	1,1-dichloroethene CAS # 75-35-4 (Lot SHBG8609V) Purity 99%	2,511.5 µg/mL	+/- 14.6021 µg/mL +/- 151.5299 µg/mL +/- 151.8897 µg/mL	Gravimetric Unstressed Stressed	
4	tert-Butanol (TBA) CAS # 75-65-0 (Lot SHBF0688V) Purity 99%	25,001.8 µg/mL	+/- 145.3547 µg/mL +/- 1,508.4656 µg/mL +/- 1,512.0470 µg/mL	Gravimetric Unstressed Stressed	
5	Methyl acetate CAS # 79-20-9 (Lot SHBG4345V) Purity 99%	5,000.5 µg/mL	+/- 29.0733 µg/mL +/- 301.7023 µg/mL +/- 302.4186 µg/mL	Gravimetric Unstressed Stressed	
6	Iodomethane (methyl iodide) CAS # 74-88-4 (Lot SHBF2149V) Purity 99%	2,502.9 µg/mL	+/- 14.5519 µg/mL +/- 151.0095 µg/mL +/- 151.3681 µg/mL	Gravimetric Unstressed Stressed	
7	Allyl chloride ( 3-chloropropene ) CAS # 107-05-1 (Lot SHBF8133V) Purity 99%	2,517.1 µg/mL	+/- 14.6348 µg/mL +/- 151.8693 µg/mL +/- 152.2299 µg/mL	Gravimetric Unstressed Stressed	



8	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBH2578V)	2,502.1 µg/mL	+/- 14.5476 +/- 150.9643 +/- 151.3227	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0 Purity 99%	(Lot S20A856)	2,501.4 µg/mL	+/- 14.5432 +/- 150.9190 +/- 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1 Purity 99%	(Lot T07B2030)	25,001.3 µg/mL	+/- 145.3518 +/- 1,508.4355 +/- 1,512.0167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether ( MTBE ) CAS # 1634-04-4 Purity 99%	(Lot SHBG2655V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 98%	(Lot MKBV2831V)	2,500.5 µg/mL	+/- 14.5379 +/- 150.8644 +/- 151.2226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) CAS # 110-54-3 Purity 99%	(Lot SHBG2674V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane CAS # 75-34-3 Purity 99%	(Lot 00008621)	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane CAS # 594-20-7 Purity 98%	(Lot BCBR0622V)	2,501.0 µg/mL	+/- 14.5408 +/- 150.8940 +/- 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot 09431AEV)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1 Purity 99%	(Lot SHBG8201V)	62,512.5 µg/mL	+/- 363.4341 +/- 3,771.6543 +/- 3,780.6088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	chloroform CAS # 67-66-3 Purity 99%	(Lot MKBV2089V)	2,501.9 µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane CAS # 74-97-5 Purity 99%	(Lot 00004559)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran CAS # 109-99-9 Purity 99%	(Lot SHBG2910V)	5,001.3 µg/mL	+/- 29.0777 +/- 301.7476 +/- 302.4640	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B15W12061)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot MKBX4768V)	2,502.0 µg/mL	+/- 14.5468 +/- 150.9567 +/- 151.3151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene CAS # 563-58-6 Purity 99%	(Lot 160727JLM)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBG1763V)	2,503.3	µg/mL	+/-	14.5541 151.0322 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) CAS # 142-82-5 Purity 99%	(Lot SHBG6171V)	2,505.5	µg/mL	+/-	14.5672 151.1679 151.5268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot SHBF9313V)	2,504.8	µg/mL	+/-	14.5628 151.1227 151.4815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBH2056V)	2,506.9	µg/mL	+/-	14.5752 151.2509 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBH1955V)	2,502.4	µg/mL	+/-	14.5490 150.9794 151.3378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane CAS # 108-87-2 Purity 98%	(Lot SHBG0634V)	2,500.3	µg/mL	+/-	14.5372 150.8570 151.2152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot 01113D0V)	2,503.0	µg/mL	+/-	14.5527 151.0171 151.3756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1 Purity 99%	(Lot SHBH2584V)	50,011.4	µg/mL	+/-	290.7552 3,017.4064 3,024.5702	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3 Purity 98%	(Lot 10183283)	2,501.9	µg/mL	+/-	14.5465 150.9531 151.3115	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 22622)	2,501.0	µg/mL	+/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3 Purity 99%	(Lot SHBH1932V)	2,504.3	µg/mL	+/-	14.5599 151.0925 151.4512	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2 Purity 99%	(Lot SHBD9190V)	2,506.9	µg/mL	+/-	14.5752 151.2509 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 99%	(Lot C584177)	2,503.6	µg/mL	+/-	14.5563 151.0548 151.4134	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FGB01)	2,501.0	µg/mL	+/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9 Purity 99%	(Lot BCBG2162V)	2,503.5	µg/mL	+/-	14.5556 151.0472 151.4059	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBD9374V)	2,500.9	µg/mL	+/-	14.5403 150.8889 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MKBW3597V)	2,500.2 µg/mL	+/- 14.5365 +/- 150.8497 +/- 151.2078	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH3877V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBF0505V)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBG4347V)	1,250.3 µg/mL	+/- 7.2691 +/- 75.4331 +/- 75.6122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBG3928V)	1,251.3 µg/mL	+/- 7.2749 +/- 75.4935 +/- 75.6727	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBG5920V)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane CAS # 630-20-6 Purity 99%	(Lot MKBS3769V)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6 Purity 99%	(Lot SHBH3432V)	2,504.9 µg/mL	+/- 14.5636 +/- 151.1302 +/- 151.4890	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5 Purity 99%	(Lot MKBS7097V)	2,506.3 µg/mL	+/- 14.5716 +/- 151.2132 +/- 151.5722	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10185056)	2,501.6 µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBD8459V)	2,502.9 µg/mL	+/- 14.5519 +/- 151.0095 +/- 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	bromodichloromethane CAS # 75-27-4 Purity 97%	(Lot MKBW5506V)	2,506.8 µg/mL	+/- 14.5750 +/- 151.2490 +/- 151.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99%	(Lot BCBH8722V)	2,508.5 µg/mL	+/- 14.5846 +/- 151.3489 +/- 151.7082	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene CAS # 110-57-6 Purity 95%	(Lot MKBP6041V)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8817 +/- 151.2399	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1 Purity 99%	(Lot MKBJ0332V)	2,501.9 µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1 Purity 99%	(Lot MKBD4032V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene CAS # 108-67-8 Purity 99%	(Lot BCBQ2165V)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8 Purity 99%	(Lot MKBW5554V)	2,500.6 µg/mL	+/- 14.5388 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4 Purity 99%	(Lot MKBL7753V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6 Purity 99%	(Lot S52237V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 98%	(Lot MKBJ6229V)	2,500.8 µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8 Purity 99%	(Lot MKBR9260V)	2,505.4 µg/mL	+/- 14.5665 +/- 151.1604 +/- 151.5193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	(Lot MKBS2604V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	2,503.9 µg/mL	+/- 14.5577 +/- 151.0699 +/- 151.4285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	2,509.9 µg/mL	+/- 14.5926 +/- 151.4319 +/- 151.7914	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8 Purity 99%	(Lot 09418JJV)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	2,505.0 µg/mL	+/- 14.5643 +/- 151.1378 +/- 151.4966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot SHBC5541V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	2,506.5 µg/mL	+/- 14.5728 +/- 151.2266 +/- 151.5856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBW2603V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,511.1 µg/mL	+/-	14.5999	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	151.5073	µg/mL	Unstressed
	Purity 99%			+/-	151.8670	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)

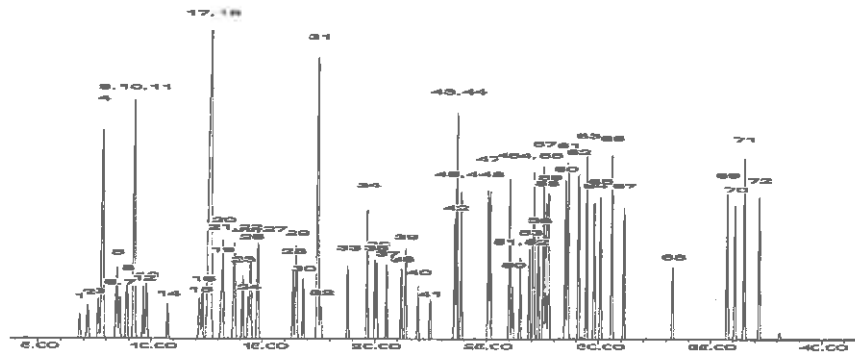
**Carrier Gas:**  
helium-constant pressure 30 psi

**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.

*F. Joseph Tallon*  
F. Joseph Tallon - Mix Technician

**Date Mixed:** 22-Dec-2016      **Balance:** B251644995

*Jennifer Pollino*  
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 04-Jan-2017

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

Reagent

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**VOA8260MEGA1\_00066**



# 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. :** 571992 **Lot No.:** A0123711  
**Description :** 8260 List 1 / Std #1 MegaMix (2017)  
8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** December 31, 2018 **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 SHBG1462V) Purity 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL	+/- 150.9115 µg/mL	+/- 151.2698 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 (Lot 00009482) Purity 99%	2,505.1 µg/mL	+/- 14.5650 µg/mL	+/- 151.1453 µg/mL	+/- 151.5041 µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene CAS # 75-35-4 (Lot SHBG8609V) Purity 99%	2,511.5 µg/mL	+/- 14.6021 µg/mL	+/- 151.5299 µg/mL	+/- 151.8897 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 (Lot SHBF0688V) Purity 99%	25,001.8 µg/mL	+/- 145.3547 µg/mL	+/- 1,508.4656 µg/mL	+/- 1,512.0470 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate CAS # 79-20-9 (Lot SHBG4345V) Purity 99%	5,000.5 µg/mL	+/- 29.0733 µg/mL	+/- 301.7023 µg/mL	+/- 302.4186 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) CAS # 74-88-4 (Lot SHBF2149V) Purity 99%	2,502.9 µg/mL	+/- 14.5519 µg/mL	+/- 151.0095 µg/mL	+/- 151.3681 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride ( 3-chloropropene ) CAS # 107-05-1 (Lot SHBF8133V) Purity 99%	2,517.1 µg/mL	+/- 14.6348 µg/mL	+/- 151.8693 µg/mL	+/- 152.2299 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBH2578V)	2,502.1 µg/mL	+/- 14.5476 +/- 150.9643 +/- 151.3227	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0 Purity 99%	(Lot S20A856)	2,501.4 µg/mL	+/- 14.5432 +/- 150.9190 +/- 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1 Purity 99%	(Lot T07B2030)	25,001.3 µg/mL	+/- 145.3518 +/- 1,508.4355 +/- 1,512.0167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether ( MTBE ) CAS # 1634-04-4 Purity 99%	(Lot SHBG2655V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 98%	(Lot MKBV2831V)	2,500.5 µg/mL	+/- 14.5379 +/- 150.8644 +/- 151.2226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) CAS # 110-54-3 Purity 99%	(Lot SHBG2674V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane CAS # 75-34-3 Purity 99%	(Lot 00008621)	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane CAS # 594-20-7 Purity 98%	(Lot BCBR0622V)	2,501.0 µg/mL	+/- 14.5408 +/- 150.8940 +/- 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot 09431AEV)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1 Purity 99%	(Lot SHBG8201V)	62,512.5 µg/mL	+/- 363.4341 +/- 3,771.6543 +/- 3,780.6088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	chloroform CAS # 67-66-3 Purity 99%	(Lot MKBV2089V)	2,501.9 µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane CAS # 74-97-5 Purity 99%	(Lot 00004559)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran CAS # 109-99-9 Purity 99%	(Lot SHBG2910V)	5,001.3 µg/mL	+/- 29.0777 +/- 301.7476 +/- 302.4640	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B15W12061)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot MKBX4768V)	2,502.0 µg/mL	+/- 14.5468 +/- 150.9567 +/- 151.3151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene CAS # 563-58-6 Purity 99%	(Lot 160727JLM)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed



24	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBG1763V)	2,503.3	µg/mL	+/-	14.5541 151.0322 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) CAS # 142-82-5 Purity 99%	(Lot SHBG6171V)	2,505.5	µg/mL	+/-	14.5672 151.1679 151.5268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot SHBF9313V)	2,504.8	µg/mL	+/-	14.5628 151.1227 151.4815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBH2056V)	2,506.9	µg/mL	+/-	14.5752 151.2509 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBH1955V)	2,502.4	µg/mL	+/-	14.5490 150.9794 151.3378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane CAS # 108-87-2 Purity 98%	(Lot SHBG0634V)	2,500.3	µg/mL	+/-	14.5372 150.8570 151.2152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot 01113D0V)	2,503.0	µg/mL	+/-	14.5527 151.0171 151.3756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1 Purity 99%	(Lot SHBH2584V)	50,011.4	µg/mL	+/-	290.7552 3,017.4064 3,024.5702	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3 Purity 98%	(Lot 10183283)	2,501.9	µg/mL	+/-	14.5465 150.9531 151.3115	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 22622)	2,501.0	µg/mL	+/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3 Purity 99%	(Lot SHBH1932V)	2,504.3	µg/mL	+/-	14.5599 151.0925 151.4512	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2 Purity 99%	(Lot SHBD9190V)	2,506.9	µg/mL	+/-	14.5752 151.2509 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 99%	(Lot C584177)	2,503.6	µg/mL	+/-	14.5563 151.0548 151.4134	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FGB01)	2,501.0	µg/mL	+/-	14.5410 150.8964 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9 Purity 99%	(Lot BCBG2162V)	2,503.5	µg/mL	+/-	14.5556 151.0472 151.4059	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBD9374V)	2,500.9	µg/mL	+/-	14.5403 150.8889 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MKBW3597V)	2,500.2 µg/mL	+/- 14.5365 +/- 150.8497 +/- 151.2078	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH3877V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBF0505V)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBG4347V)	1,250.3 µg/mL	+/- 7.2691 +/- 75.4331 +/- 75.6122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBG3928V)	1,251.3 µg/mL	+/- 7.2749 +/- 75.4935 +/- 75.6727	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBG5920V)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane CAS # 630-20-6 Purity 99%	(Lot MKBS3769V)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6 Purity 99%	(Lot SHBH3432V)	2,504.9 µg/mL	+/- 14.5636 +/- 151.1302 +/- 151.4890	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5 Purity 99%	(Lot MKBS7097V)	2,506.3 µg/mL	+/- 14.5716 +/- 151.2132 +/- 151.5722	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10185056)	2,501.6 µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBD8459V)	2,502.9 µg/mL	+/- 14.5519 +/- 151.0095 +/- 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	bromodichloromethane CAS # 75-27-4 Purity 97%	(Lot MKBW5506V)	2,506.8 µg/mL	+/- 14.5750 +/- 151.2490 +/- 151.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99%	(Lot BCBH8722V)	2,508.5 µg/mL	+/- 14.5846 +/- 151.3489 +/- 151.7082	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene CAS # 110-57-6 Purity 95%	(Lot MKBP6041V)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8817 +/- 151.2399	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1 Purity 99%	(Lot MKBJ0332V)	2,501.9 µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1 Purity 99%	(Lot MKBD4032V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene CAS # 108-67-8 Purity 99%	(Lot BCBQ2165V)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8 Purity 99%	(Lot MKBW5554V)	2,500.6 µg/mL	+/- 14.5388 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4 Purity 99%	(Lot MKBL7753V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6 Purity 99%	(Lot S52237V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 98%	(Lot MKBJ6229V)	2,500.8 µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8 Purity 99%	(Lot MKBR9260V)	2,505.4 µg/mL	+/- 14.5665 +/- 151.1604 +/- 151.5193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	(Lot MKBS2604V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	2,503.9 µg/mL	+/- 14.5577 +/- 151.0699 +/- 151.4285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS1350V)	2,509.9 µg/mL	+/- 14.5926 +/- 151.4319 +/- 151.7914	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8 Purity 99%	(Lot 09418JJV)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBD7331V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	2,505.0 µg/mL	+/- 14.5643 +/- 151.1378 +/- 151.4966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot SHBC5541V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 98%	(Lot J31X013)	2,506.5 µg/mL	+/- 14.5728 +/- 151.2266 +/- 151.5856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBW2603V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,511.1 µg/mL	+/-	14.5999	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	151.5073	µg/mL	Unstressed
	Purity 99%			+/-	151.8670	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)

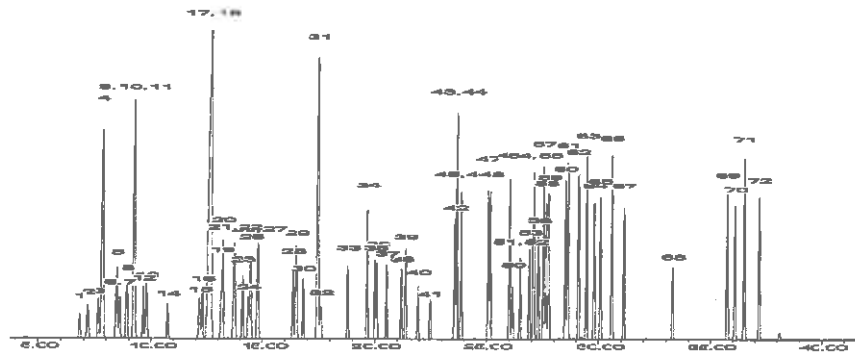
**Carrier Gas:**  
helium-constant pressure 30 psi

**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.

*F. Joseph Tallon*  
F. Joseph Tallon - Mix Technician

**Date Mixed:** 22-Dec-2016      **Balance:** B251644995

*Jennifer A. Pollino*  
Jennifer Pollino - Operations Tech-ARM QC

**Date Passed:** 04-Jan-2017

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

Reagent

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**VOA8260SURRES\_00118**



# 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. : 567650 Lot No.: A0114901  
 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 : October 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	2,509.4 µg/mL (Lot 022012)	+/-	14.5899	µg/mL	Gravimetric
	CAS # 1868-53-7		+/-	140.6996	µg/mL	Unstressed
	Purity 99%		+/-	143.9918	µg/mL	Stressed
2	1,2-Dichloroethane-d4	2,509.0 µg/mL (Lot PR-25433)	+/-	14.5875	µg/mL	Gravimetric
	CAS # 17060-07-0		+/-	140.6769	µg/mL	Unstressed
	Purity 98%		+/-	143.9686	µg/mL	Stressed
3	Toluene-d8	2,507.0 µg/mL (Lot PR-26282)	+/-	14.5759	µg/mL	Gravimetric
	CAS # 2037-26-5		+/-	140.5650	µg/mL	Unstressed
	Purity 99%		+/-	143.8540	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,503.6 µg/mL (Lot 20401KOV)	+/-	14.5561	µg/mL	Gravimetric
	CAS # 460-00-4		+/-	140.3744	µg/mL	Unstressed
	Purity 99%		+/-	143.6590	µg/mL	Stressed

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

Reagent

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**VOA8260SURRES\_00120**



# 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. : 567650 Lot No.: A0114901

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 : October 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	2,509.4 µg/mL (Lot 022012)	+/-	14.5899	µg/mL	Gravimetric
	CAS # 1868-53-7		+/-	140.6996	µg/mL	Unstressed
	Purity 99%		+/-	143.9918	µg/mL	Stressed
2	1,2-Dichloroethane-d4	2,509.0 µg/mL (Lot PR-25433)	+/-	14.5875	µg/mL	Gravimetric
	CAS # 17060-07-0		+/-	140.6769	µg/mL	Unstressed
	Purity 98%		+/-	143.9686	µg/mL	Stressed
3	Toluene-d8	2,507.0 µg/mL (Lot PR-26282)	+/-	14.5759	µg/mL	Gravimetric
	CAS # 2037-26-5		+/-	140.5650	µg/mL	Unstressed
	Purity 99%		+/-	143.8540	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,503.6 µg/mL (Lot 20401KOV)	+/-	14.5561	µg/mL	Gravimetric
	CAS # 460-00-4		+/-	140.3744	µg/mL	Unstressed
	Purity 99%		+/-	143.6590	µg/mL	Stressed

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



Reagent

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**VOA8260VARES\_00083**



# 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.:** A0124520

**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 :** July 31, 2017 **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)	5,027.0 µg/mL	+/- 29.5013	µg/mL	Gravimetric
			+/- 303.3277	µg/mL	Unstressed
			+/- 304.0477	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.

Reagent

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**VOAACRORES\_00115**



# 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. :** 568720 **Lot No.:** A0125560

**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 :** September 30, 2017 **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 Purity 99% (Lot 170123JLM)	19,779.0 µg/mL	+/- 115.8104 µg/mL Gravimetric +/- 634.1769 µg/mL Unstressed +/- 737.1613 µg/mL Stressed

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

Reagent

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**VOABFBRES\_00055**



# 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. :** 30067 **Lot No.:** A0122647

**Description :** 4-Bromofluorobenzene Standard  
4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

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

**Expiration Date :** November 30, 2021 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1-Bromo-4-fluorobenzene (BFB) CAS # 460-00-4 (Lot 20401KOV) Purity 99%	2,524.0 µg/mL	+/-	14.8122	µg/mL	Gravimetric
			+/-	141.5325	µg/mL	Unstressed
			+/-	144.8435	µg/mL	Stressed

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

Reagent

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**VOABFBRES\_00058**



# 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. :** 30067 **Lot No.:** A0122647

**Description :** 4-Bromofluorobenzene Standard  
4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

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

**Expiration Date :** November 30, 2021 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1-Bromo-4-fluorobenzene (BFB)	2,524.0 µg/mL	+/-	14.8122	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KOV)		+/-	141.5325	µg/mL	Unstressed
	Purity 99%		+/-	144.8435	µg/mL	Stressed

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



Reagent

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**VOACEVERES\_00127**



# 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. :** 569723 **Lot No.:** A0123891

**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 :** January 31, 2020 **Storage:** 0°C or colder

2406027  
28  
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### 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 Purity 98% (Lot MKBS6526V)	2,503.5 µg/mL	+/-	14.5556	µg/mL	Gravimetric
			+/-	53.6004	µg/mL	Unstressed
			+/-	55.1587	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

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**VOARESEE1ST\_00045**



# 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. : 568363-FL Lot No.: A0120234

Description : Custom EE Standard

Custom EE Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : January 31, 2018 Storage: 0°C or colder

2396751

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	3-Chlorobenzotrifluoride	5,025.0 µg/mL (Lot 21324DO)	+/-	29.4895	µg/mL	Gravimetric
	CAS # 98-15-7		+/-	281.7753	µg/mL	Unstressed
	Purity 99%		+/-	288.3671	µg/mL	Stressed
2	4-Chlorobenzotrifluoride	5,031.0 µg/mL (Lot 08507BO)	+/-	29.5247	µg/mL	Gravimetric
	CAS # 98-56-6		+/-	282.1117	µg/mL	Unstressed
	Purity 99%		+/-	288.7115	µg/mL	Stressed
3	2-Chlorobenzotrifluoride	5,011.0 µg/mL (Lot I0316DQ)	+/-	29.4074	µg/mL	Gravimetric
	CAS # 88-16-4		+/-	280.9902	µg/mL	Unstressed
	Purity 99%		+/-	287.5637	µg/mL	Stressed
4	3-Chlorotoluene	5,046.0 µg/mL (Lot 13528LX)	+/-	29.6128	µg/mL	Gravimetric
	CAS # 108-41-8		+/-	282.9528	µg/mL	Unstressed
	Purity 99%		+/-	289.5723	µg/mL	Stressed
5	2,4-Dichlorobenzotrifluoride	5,018.0 µg/mL (Lot MKBL3552V)	+/-	29.4484	µg/mL	Gravimetric
	CAS # 320-60-5		+/-	281.3828	µg/mL	Unstressed
	Purity 99%		+/-	287.9654	µg/mL	Stressed
6	3,4-Dichlorobenzotrifluoride	5,031.0 µg/mL (Lot 11105EJV)	+/-	29.5247	µg/mL	Gravimetric
	CAS # 328-84-7		+/-	282.1117	µg/mL	Unstressed
	Purity 99%		+/-	288.7115	µg/mL	Stressed
7	2,5-Dichlorobenzotrifluoride	5,047.0 µg/mL (Lot 04415DSV)	+/-	29.6186	µg/mL	Gravimetric
	CAS # 320-50-3		+/-	283.0089	µg/mL	Unstressed
	Purity 99%		+/-	289.6296	µg/mL	Stressed

# Method 8260C Low Level

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Volatile Organic Compounds (GC/MS)  
by Method 8260C Low Level

FORM II  
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
HD-MW-103D-0/1-0	180-71467-1	102	109	88	90
HD-MW-103S-0/1-0	180-71467-2	103	110	92	89
HD-MW-102D-0/1-0	180-71467-3	104	108	86	83
HD-MW-102S-0/1-0	180-71467-4	107	109	92	90
HD-RW-2-0/1-0	180-71467-5	105	111	88	87
HD-MW-57-0/1-0	180-71467-6	105	114	90	86
HD-QC1-0/1-2	180-71467-7	110	114	90	86
HD-QC1-0/1-1	180-71467-8	105	112	91	88
HD-QC1-0/1-3	180-71467-9	109	113	90	90
HD-QC1-0/1-4	180-71467-10	113	118	90	86
	MB 180-226849/5	102	110	92	92
	MB 180-227010/5	105	109	94	92
	LCS 180-226849/3	87	95	94	90
	LCS 180-227010/3	90	93	95	93
HD-MW-102S-0/1-0 MS	180-71467-4 MS	85	92	90	91
HD-MW-102S-0/1-0 MSD	180-71467-4 MSD	95	95	107	103

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

QC LIMITS  
73-120  
65-121  
73-120  
80-120

# Column to be used to flag recovery values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low

Lab File ID: 51024D03.D

Lab ID: LCS 180-226849/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	12.2	122	49-135	
Vinyl chloride	10.0	9.94	99	52-136	
Bromomethane	10.0	7.76	78	37-150	
Chloroethane	10.0	9.73	97	44-139	
1,1-Dichloroethene	10.0	9.89	99	64-131	
Acetone	20.0	23.2	116	24-150	
Carbon disulfide	10.0	9.22	92	20-150	
Methylene Chloride	10.0	9.49	95	66-123	
trans-1,2-Dichloroethene	10.0	9.15	92	70-123	
Methyl tert-butyl ether	10.0	9.12	91	66-130	
1,1-Dichloroethane	10.0	9.88	99	66-122	
cis-1,2-Dichloroethene	10.0	9.10	91	73-120	
Bromochloromethane	10.0	9.60	96	73-122	
2-Butanone (MEK)	20.0	22.5	113	37-150	
Chloroform	10.0	8.99	90	72-123	
1,1,1-Trichloroethane	10.0	9.32	93	66-129	
Carbon tetrachloride	10.0	9.38	94	58-145	
Benzene	10.0	8.81	88	75-123	
1,2-Dichloroethane	10.0	10.3	103	63-130	
Trichloroethene	10.0	8.68	87	74-121	
1,2-Dichloropropane	10.0	9.32	93	67-119	
Bromodichloromethane	10.0	8.39	84	62-127	
cis-1,3-Dichloropropene	10.0	8.34	83	61-127	
4-Methyl-2-pentanone (MIBK)	20.0	20.5	103	41-135	
Toluene	10.0	9.25	92	76-129	
trans-1,3-Dichloropropene	10.0	9.10	91	61-136	
1,1,2-Trichloroethane	10.0	9.51	95	74-126	
Tetrachloroethene	10.0	8.59	86	76-128	
2-Hexanone	20.0	19.6	98	37-150	
Dibromochloromethane	10.0	9.26	93	63-131	
1,2-Dibromoethane (EDB)	10.0	9.05	90	76-128	
Chlorobenzene	10.0	8.99	90	79-124	
1,1,1,2-Tetrachloroethane	10.0	9.19	92	70-130	
Ethylbenzene	10.0	8.74	87	77-124	
Xylenes, Total	20.0	17.7	89	76-124	
Styrene	10.0	9.01	90	80-125	
Bromoform	10.0	8.13	81	54-136	
1,1,2,2-Tetrachloroethane	10.0	8.90	89	72-128	
Acrylonitrile	100	109	109	60-130	
1,4-Dioxane	200	192 J	96	26-150	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low

Lab File ID: 51025D03.D

Lab ID: LCS 180-227010/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	13.7	137	49-135	*
Vinyl chloride	10.0	10.6	106	52-136	
Bromomethane	10.0	6.88	69	37-150	
Chloroethane	10.0	9.57	96	44-139	
1,1-Dichloroethene	10.0	10.2	102	64-131	
Acetone	20.0	26.4	132	24-150	
Carbon disulfide	10.0	10.0	100	20-150	
Methylene Chloride	10.0	9.78	98	66-123	
trans-1,2-Dichloroethene	10.0	10.0	100	70-123	
Methyl tert-butyl ether	10.0	9.29	93	66-130	
1,1-Dichloroethane	10.0	10.2	102	66-122	
cis-1,2-Dichloroethene	10.0	9.49	95	73-120	
Bromochloromethane	10.0	9.54	95	73-122	
2-Butanone (MEK)	20.0	23.5	117	37-150	
Chloroform	10.0	9.19	92	72-123	
1,1,1-Trichloroethane	10.0	9.70	97	66-129	
Carbon tetrachloride	10.0	9.92	99	58-145	
Benzene	10.0	9.20	92	75-123	
1,2-Dichloroethane	10.0	10.1	101	63-130	
Trichloroethene	10.0	8.92	89	74-121	
1,2-Dichloropropane	10.0	9.45	95	67-119	
Bromodichloromethane	10.0	8.92	89	62-127	
cis-1,3-Dichloropropene	10.0	8.58	86	61-127	
4-Methyl-2-pentanone (MIBK)	20.0	22.0	110	41-135	
Toluene	10.0	9.90	99	76-129	
trans-1,3-Dichloropropene	10.0	9.64	96	61-136	
1,1,2-Trichloroethane	10.0	9.41	94	74-126	
Tetrachloroethene	10.0	9.21	92	76-128	
2-Hexanone	20.0	21.8	109	37-150	
Dibromochloromethane	10.0	9.57	96	63-131	
1,2-Dibromoethane (EDB)	10.0	9.35	94	76-128	
Chlorobenzene	10.0	9.41	94	79-124	
1,1,1,2-Tetrachloroethane	10.0	9.79	98	70-130	
Ethylbenzene	10.0	9.66	97	77-124	
Xylenes, Total	20.0	19.0	95	76-124	
Styrene	10.0	9.79	98	80-125	
Bromoform	10.0	8.10	81	54-136	
1,1,2,2-Tetrachloroethane	10.0	8.53	85	72-128	
Acrylonitrile	100	106	106	60-130	
1,4-Dioxane	200	190 J	95	26-150	

# Column to be used to flag recovery and RPD values



FORM III  
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low

Lab File ID: 51025D07.D

Lab ID: 180-71467-4 MS

Client ID: HD-MW-102S-0/1-0 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chloromethane	10.0	1.0 U	13.6	136	49-135	F1
Vinyl chloride	10.0	1.0 U	11.4	114	52-136	
Bromomethane	10.0	1.0 U	8.45	84	37-150	
Chloroethane	10.0	1.0 U	10.1	101	44-139	
1,1-Dichloroethene	10.0	4.6	14.1	95	64-131	
Acetone	20.0	5.0 U	58.7	294	24-150	F1
Carbon disulfide	10.0	1.0 U	10.1	101	20-150	
Methylene Chloride	10.0	1.0 U	9.53	95	66-123	
trans-1,2-Dichloroethene	10.0	1.0 U	9.89	99	70-123	
Methyl tert-butyl ether	10.0	1.0 U	9.34	93	66-130	
1,1-Dichloroethane	10.0	1.2	11.3	100	66-122	
cis-1,2-Dichloroethene	10.0	6.0	15.3	92	73-120	
Bromochloromethane	10.0	1.0 U	9.90	99	73-122	
2-Butanone (MEK)	20.0	5.0 U	20.2	101	37-150	
Chloroform	10.0	1.0 U	9.37	94	72-123	
1,1,1-Trichloroethane	10.0	4.6	14.2	95	66-129	
Carbon tetrachloride	10.0	1.0 U	10.4	104	58-145	
Benzene	10.0	1.0 U	9.43	94	75-123	
1,2-Dichloroethane	10.0	1.0 U	10.3	103	63-130	
Trichloroethene	10.0	24	28.0	40	74-121	F1
1,2-Dichloropropane	10.0	1.0 U	9.54	95	67-119	
Bromodichloromethane	10.0	1.0 U	8.75	87	62-127	
cis-1,3-Dichloropropene	10.0	1.0 U	8.51	85	61-127	
4-Methyl-2-pentanone (MIBK)	20.0	5.0 U	21.5	107	41-135	
Toluene	10.0	1.0 U	10.3	103	76-129	
trans-1,3-Dichloropropene	10.0	1.0 U	9.83	98	61-136	
1,1,2-Trichloroethane	10.0	1.0 U	9.71	97	74-126	
Tetrachloroethene	10.0	13	21.5	88	76-128	
2-Hexanone	20.0	5.0 U	19.3	97	37-150	
Dibromochloromethane	10.0	1.0 U	9.80	98	63-131	
1,2-Dibromoethane (EDB)	10.0	1.0 U	9.24	92	76-128	
Chlorobenzene	10.0	1.0 U	9.96	100	79-124	
1,1,1,2-Tetrachloroethane	10.0	1.0 U	10.2	102	70-130	
Ethylbenzene	10.0	1.0 U	9.78	98	77-124	
Xylenes, Total	20.0	2.0 U	19.8	99	76-124	
Styrene	10.0	1.0 U	9.94	99	80-125	
Bromoform	10.0	1.0 U	8.95	90	54-136	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.04	90	72-128	
Acrylonitrile	100	20 U	109	109	60-130	
1,4-Dioxane	200	200 U	192 J	96	26-150	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low

Lab File ID: 51025D08.D

Lab ID: 180-71467-4 MSD

Client ID: HD-MW-102S-0/1-0 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chloromethane	10.0	13.0	130	5	20	49-135	
Vinyl chloride	10.0	10.9	109	4	19	52-136	
Bromomethane	10.0	8.46	85	0	23	37-150	
Chloroethane	10.0	10.4	104	2	19	44-139	
1,1-Dichloroethene	10.0	14.4	98	2	20	64-131	
Acetone	20.0	34.3	172	52	35	24-150	F1 F2
Carbon disulfide	10.0	10.3	103	2	21	20-150	
Methylene Chloride	10.0	9.60	96	1	22	66-123	
trans-1,2-Dichloroethene	10.0	9.95	100	1	19	70-123	
Methyl tert-butyl ether	10.0	9.22	92	1	23	66-130	
1,1-Dichloroethane	10.0	11.4	102	2	20	66-122	
cis-1,2-Dichloroethene	10.0	15.0	90	1	23	73-120	
Bromochloromethane	10.0	9.08	91	9	24	73-122	
2-Butanone (MEK)	20.0	18.1	91	11	35	37-150	
Chloroform	10.0	9.28	93	1	20	72-123	
1,1,1-Trichloroethane	10.0	13.9	92	2	21	66-129	
Carbon tetrachloride	10.0	10.5	105	1	22	58-145	
Benzene	10.0	9.19	92	3	20	75-123	
1,2-Dichloroethane	10.0	10.0	100	3	21	63-130	
Trichloroethene	10.0	27.6	36	1	20	74-121	F1
1,2-Dichloropropane	10.0	9.21	92	4	21	67-119	
Bromodichloromethane	10.0	8.48	85	3	19	62-127	
cis-1,3-Dichloropropene	10.0	8.03	80	6	22	61-127	
4-Methyl-2-pentanone (MIBK)	20.0	21.3	106	1	35	41-135	
Toluene	10.0	10.4	104	0	18	76-129	
trans-1,3-Dichloropropene	10.0	10.1	101	3	17	61-136	
1,1,2-Trichloroethane	10.0	9.79	98	1	20	74-126	
Tetrachloroethene	10.0	21.8	92	2	20	76-128	
2-Hexanone	20.0	20.1	101	4	35	37-150	
Dibromochloromethane	10.0	10.1	101	3	20	63-131	
1,2-Dibromoethane (EDB)	10.0	9.51	95	3	21	76-128	
Chlorobenzene	10.0	10.2	102	3	16	79-124	
1,1,1,2-Tetrachloroethane	10.0	10.4	104	2	17	70-130	
Ethylbenzene	10.0	10.0	100	3	16	77-124	
Xylenes, Total	20.0	20.5	103	4	17	76-124	
Styrene	10.0	9.92	99	0	18	80-125	
Bromoform	10.0	8.64	86	4	23	54-136	
1,1,2,2-Tetrachloroethane	10.0	9.13	91	1	24	72-128	
Acrylonitrile	100	102	102	6	32	60-130	
1,4-Dioxane	200	171 J	85	11	35	26-150	

# Column to be used to flag recovery and RPD values

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 51024D05.D Lab Sample ID: MB 180-226849/5  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: CHHP5 Date Analyzed: 10/25/2017 01:02  
 GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-226849/3	51024D03.D	10/25/2017 00:03
HD-MW-103S-0/1-0	180-71467-2	51024D22.D	10/25/2017 08:03
HD-RW-2-0/1-0	180-71467-5	51024D25.D	10/25/2017 09:15
HD-MW-57-0/1-0	180-71467-6	51024D26.D	10/25/2017 09:39
HD-QC1-0/1-2	180-71467-7	51024D27.D	10/25/2017 10:03

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 51025D05.D Lab Sample ID: MB 180-227010/5  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: CHHP5 Date Analyzed: 10/25/2017 23:51  
 GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-227010/3	51025D03.D	10/25/2017 22:51
HD-MW-102S-0/1-0	180-71467-4	51025D06.D	10/26/2017 00:27
HD-MW-102S-0/1-0 MS	180-71467-4 MS	51025D07.D	10/26/2017 00:55
HD-MW-102S-0/1-0 MSD	180-71467-4 MSD	51025D08.D	10/26/2017 01:20
HD-MW-103D-0/1-0	180-71467-1	51025D10.D	10/26/2017 02:08
HD-MW-102D-0/1-0	180-71467-3	51025D11.D	10/26/2017 02:31
HD-QC1-0/1-1	180-71467-8	51025D12.D	10/26/2017 02:55
HD-QC1-0/1-3	180-71467-9	51025D13.D	10/26/2017 03:19
HD-QC1-0/1-4	180-71467-10	51025D14.D	10/26/2017 03:43

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50727D01.D BFB Injection Date: 07/27/2017  
 Instrument ID: CHHP5 BFB Injection Time: 00:22  
 Analysis Batch No.: 218218

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	47.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.9
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	75.4
175	5.0 - 9.0 % of mass 174	5.4 (7.2) 1
176	95.0 - 101.0 % of mass 174	74.0 (98.2) 1
177	5.0 - 9.0 % of mass 176	4.8 (6.5) 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 180-218218/2	50727D02.D	07/27/2017	00:51
	IC 180-218218/3	50727D03.D	07/27/2017	01:15
	ICIS 180-218218/4	50727D04.D	07/27/2017	01:39
	IC 180-218218/5	50727D05.D	07/27/2017	02:02
	IC 180-218218/6	50727D06.D	07/27/2017	02:26
	IC 180-218218/8	50727D08.D	07/27/2017	03:13
	IC 180-218218/10	50727D10.D	07/27/2017	04:00
	IC 180-218218/11	50727D11.D	07/27/2017	04:24

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 51024D01.D BFB Injection Date: 10/24/2017  
 Instrument ID: CHHP5 BFB Injection Time: 22:50  
 Analysis Batch No.: 226849

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	46.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	1.3	(1.8) 1
174	50.0 - 120.00 % of mass 95	71.1	
175	5.0 - 9.0 % of mass 174	5.7	(8.0) 1
176	95.0 - 101.0 % of mass 174	71.0	(99.9) 1
177	5.0 - 9.0 % of mass 176	4.9	(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
	CCVIS 180-226849/2	51024D02.D	10/24/2017	23:23
	LCS 180-226849/3	51024D03.D	10/25/2017	00:03
	MB 180-226849/5	51024D05.D	10/25/2017	01:02
HD-MW-103S-0/1-0	180-71467-2	51024D22.D	10/25/2017	08:03
HD-RW-2-0/1-0	180-71467-5	51024D25.D	10/25/2017	09:15
HD-MW-57-0/1-0	180-71467-6	51024D26.D	10/25/2017	09:39
HD-QC1-0/1-2	180-71467-7	51024D27.D	10/25/2017	10:03

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 51025D01.D BFB Injection Date: 10/25/2017  
 Instrument ID: CHHP5 BFB Injection Time: 21:39  
 Analysis Batch No.: 227010

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.7
75	30.0 - 60.0 % of mass 95	45.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	5.2
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	75.6
175	5.0 - 9.0 % of mass 174	5.1 (6.7) 1
176	95.0 - 101.0 % of mass 174	73.7 (97.4) 1
177	5.0 - 9.0 % of mass 176	5.3 (7.2) 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
	CCVIS 180-227010/2	51025D02.D	10/25/2017	22:12
	LCS 180-227010/3	51025D03.D	10/25/2017	22:51
	MB 180-227010/5	51025D05.D	10/25/2017	23:51
HD-MW-102S-0/1-0	180-71467-4	51025D06.D	10/26/2017	00:27
HD-MW-102S-0/1-0 MS	180-71467-4 MS	51025D07.D	10/26/2017	00:55
HD-MW-102S-0/1-0 MSD	180-71467-4 MSD	51025D08.D	10/26/2017	01:20
HD-MW-103D-0/1-0	180-71467-1	51025D10.D	10/26/2017	02:08
HD-MW-102D-0/1-0	180-71467-3	51025D11.D	10/26/2017	02:31
HD-QC1-0/1-1	180-71467-8	51025D12.D	10/26/2017	02:55
HD-QC1-0/1-3	180-71467-9	51025D13.D	10/26/2017	03:19
HD-QC1-0/1-4	180-71467-10	51025D14.D	10/26/2017	03:43

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-226849/2 Date Analyzed: 10/24/2017 23:23  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 51024D02.D Heated Purge: (Y/N) N  
 Calibration ID: 35038

	TBA <sub>d</sub> 9		FB		CBN <sub>Z</sub> d <sub>5</sub>		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	164866	4.38	468486	7.33	111929	10.43	
UPPER LIMIT	329732	4.88	936972	7.83	223858	10.93	
LOWER LIMIT	82433	3.88	234243	6.83	55965	9.93	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-226849/3	188196	4.38	489385	7.33	115905	10.44	
MB 180-226849/5	198793	4.36	506554	7.34	126455	10.43	
180-71467-2	HD-MW-103S-0/1-0	173068	4.37	488424	7.34	124421	10.43
180-71467-5	HD-RW-2-0/1-0	165399	4.36	447628	7.34	116618	10.43
180-71467-6	HD-MW-57-0/1-0	161646	4.36	440060	7.34	112653	10.44
180-71467-7	HD-QC1-0/1-2	159713	4.36	437901	7.34	111220	10.43

TBA<sub>d</sub>9 = TBA-d<sub>9</sub> (IS)

FB = Fluorobenzene (IS)

CBN<sub>Z</sub>d<sub>5</sub> = Chlorobenzene-d<sub>5</sub>

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 Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-226849/2 Date Analyzed: 10/24/2017 23:23  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 51024D02.D Heated Purge: (Y/N) N  
 Calibration ID: 35038

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		172751	12.77				
UPPER LIMIT		345502	13.27				
LOWER LIMIT		86376	12.27				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-226849/3		167353	12.77				
MB 180-226849/5		190824	12.77				
180-71467-2	HD-MW-103S-0/1-0	185822	12.77				
180-71467-5	HD-RW-2-0/1-0	160305	12.77				
180-71467-6	HD-MW-57-0/1-0	158560	12.77				
180-71467-7	HD-QC1-0/1-2	155179	12.77				

DCBd4 = 1,4-Dichlorobenzene-d4

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 Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-227010/2 Date Analyzed: 10/25/2017 22:12  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 51025D02.D Heated Purge: (Y/N) N  
 Calibration ID: 35038

	TBA <sub>d</sub> 9		FB		CBN <sub>Zd</sub> 5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	183590	4.38	526834	7.34	114566	10.43	
UPPER LIMIT	367180	4.88	1053668	7.84	229132	10.93	
LOWER LIMIT	91795	3.88	263417	6.84	57283	9.93	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-227010/3	196941	4.39	509802	7.34	118325	10.43	
MB 180-227010/5	204506	4.37	490132	7.34	118973	10.43	
180-71467-4	HD-MW-102S-0/1-0	215329	4.36	480041	7.34	121057	10.43
180-71467-4 MS	HD-MW-102S-0/1-0 MS	193191	4.38	493235	7.33	107512	10.43
180-71467-4 MSD	HD-MW-102S-0/1-0 MSD	190347	4.38	520331	7.34	111669	10.43
180-71467-1	HD-MW-103D-0/1-0	204005	4.37	475781	7.34	121041	10.43
180-71467-3	HD-MW-102D-0/1-0	181977	4.36	443165	7.34	116137	10.43
180-71467-8	HD-QC1-0/1-1	178061	4.37	437170	7.34	110539	10.43
180-71467-9	HD-QC1-0/1-3	192908	4.36	435136	7.34	108848	10.43
180-71467-10	HD-QC1-0/1-4	178075	4.36	411727	7.34	105919	10.44

TBA<sub>d</sub>9 = TBA-d9 (IS)

FB = Fluorobenzene (IS)

CBN<sub>Zd</sub>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 Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-227010/2 Date Analyzed: 10/25/2017 22:12  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 51025D02.D Heated Purge: (Y/N) N  
 Calibration ID: 35038

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		166995	12.77				
UPPER LIMIT		333990	13.27				
LOWER LIMIT		83498	12.27				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-227010/3		167377	12.77				
MB 180-227010/5		173707	12.77				
180-71467-4	HD-MW-102S-0/1-0	172988	12.77				
180-71467-4 MS	HD-MW-102S-0/1-0 MS	158099	12.77				
180-71467-4 MSD	HD-MW-102S-0/1-0 MSD	161652	12.77				
180-71467-1	HD-MW-103D-0/1-0	174320	12.77				
180-71467-3	HD-MW-102D-0/1-0	156178	12.77				
180-71467-8	HD-QC1-0/1-1	154265	12.77				
180-71467-9	HD-QC1-0/1-3	158665	12.77				
180-71467-10	HD-QC1-0/1-4	154075	12.77				

DCBd4 = 1,4-Dichlorobenzene-d4

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 I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-103D-0/1-0 Lab Sample ID: 180-71467-1  
 Matrix: Water Lab File ID: 51025D10.D  
 Analysis Method: 8260C Date Collected: 10/16/2017 14:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 02:08  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U *	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U ^c	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	1.8		1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	2.2		1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	9.3		1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-103D-0/1-0 Lab Sample ID: 180-71467-1  
 Matrix: Water Lab File ID: 51025D10.D  
 Analysis Method: 8260C Date Collected: 10/16/2017 14:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 02:08  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		65-121
2037-26-5	Toluene-d8 (Surr)	88		73-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D10.D  
 Lims ID: 180-71467-C-1  
 Client ID: HD-MW-103D-0/1-0  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 02:08:30 ALS Bottle#: 10 Worklist Smp#: 10  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-010  
 Misc. Info.: 180-71467-C-1  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 03:08:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.370	4.384	-0.014	0	204005	1000.0	
* 2 Fluorobenzene (IS)	96	7.338	7.340	-0.002	98	475781	50.0	
* 3 Chlorobenzene-d5	119	10.433	10.429	0.004	86	121041	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.768	12.770	-0.002	97	174320	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.620	6.610	0.010	93	116372	50.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.991	6.987	0.004	0	151815	54.4	
\$ 7 Toluene-d8 (Surr)	98	8.979	8.982	-0.003	94	423947	44.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.613	11.609	0.004	86	155861	44.8	
12 Chloromethane	50		1.891				ND	
13 Vinyl chloride	62		2.012				ND	
15 Bromomethane	94		2.335				ND	
16 Chloroethane	64		2.426				ND	
22 1,1-Dichloroethene	96		3.411				ND	
24 Acetone	43		3.539				ND	
26 Carbon disulfide	76		3.703				ND	
31 Methylene Chloride	84		4.226				ND	
33 Acrylonitrile	53		4.609				ND	
34 trans-1,2-Dichloroethene	96		4.640				ND	
35 Methyl tert-butyl ether	73		4.664				ND	
37 1,1-Dichloroethane	63		5.266				ND	
45 cis-1,2-Dichloroethene	96	6.018	6.008	0.010	84	27676	9.12	
46 2-Butanone (MEK)	43		6.026				ND	
49 Chlorobromomethane	128		6.288				ND	
52 Chloroform	83	6.444	6.434	0.010	95	13382	2.90	
53 1,1,1-Trichloroethane	97		6.592				ND	
56 Carbon tetrachloride	117		6.762				ND	
58 Benzene	78		6.993				ND	
59 1,2-Dichloroethane	62		7.072				ND	
64 Trichloroethene	130	7.727	7.723	0.004	98	31451	10.8	
67 1,2-Dichloropropane	63		7.997				ND	
70 1,4-Dioxane	88		8.082				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.276				ND	
74 cis-1,3-Dichloropropene	75		8.720				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.872				ND	
76 Toluene	91		9.049				ND	
77 trans-1,3-Dichloropropene	75		9.298				ND	
79 1,1,2-Trichloroethane	97		9.486				ND	
80 Tetrachloroethene	164	9.557	9.559	-0.002	95	107101	46.5	
82 2-Hexanone	43		9.705				ND	
84 Chlorodibromomethane	129		9.857				ND	
85 Ethylene Dibromide	107		9.967				ND	
87 Chlorobenzene	112		10.459				ND	
89 1,1,1,2-Tetrachloroethane	131		10.551				ND	
90 Ethylbenzene	106		10.557				ND	
91 m-Xylene & p-Xylene	106		10.684				ND	
92 o-Xylene	106		11.068				ND	
93 Styrene	104		11.092				ND	
94 Bromoform	173		11.274				ND	
99 1,1,2,2-Tetrachloroethane	83		11.749				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D10.D

Injection Date: 26-Oct-2017 02:08:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-C-1

Lab Sample ID: 180-71467-1

Worklist Smp#: 10

Client ID: HD-MW-103D-0/1-0

Purge Vol: 5.000 mL

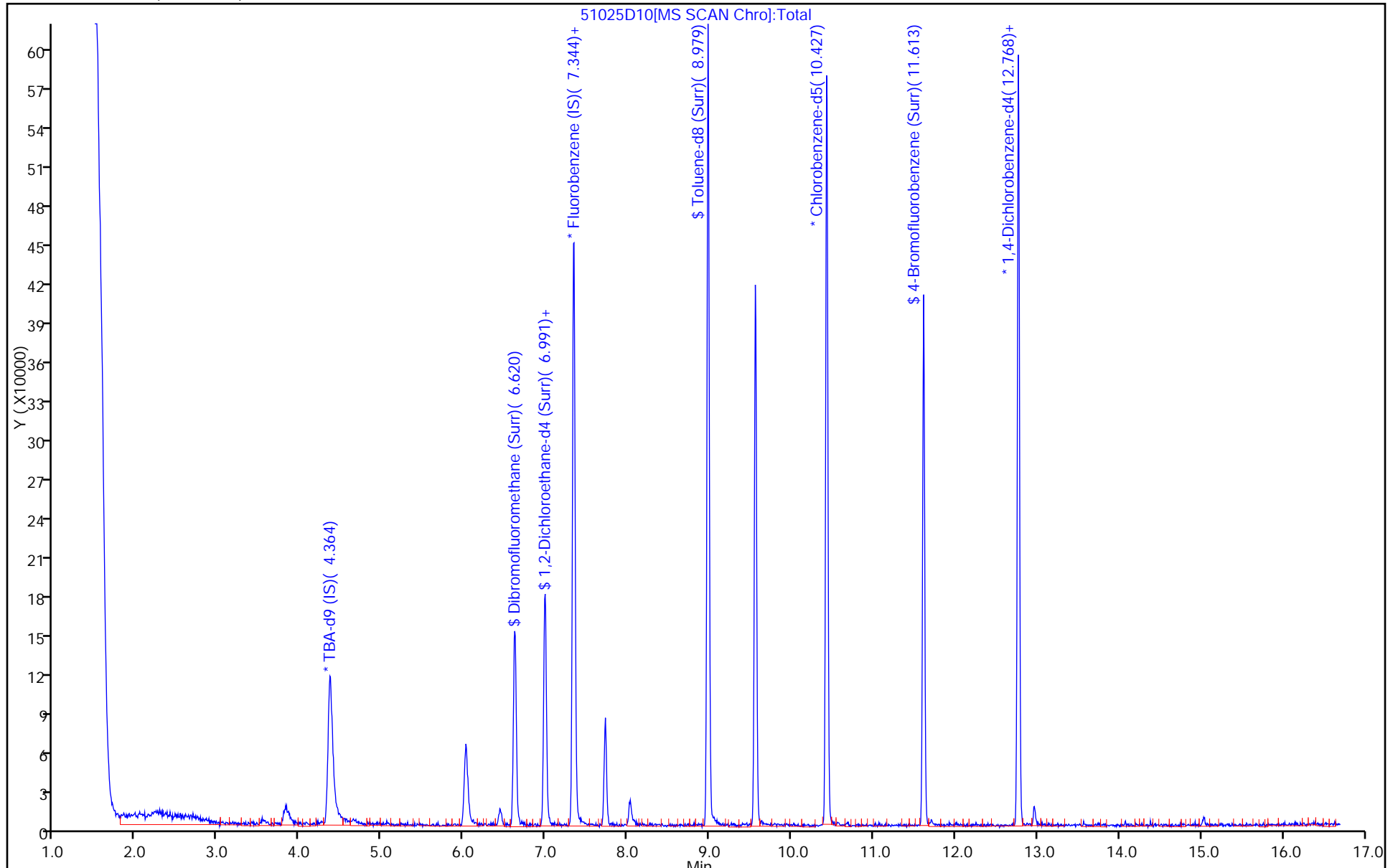
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D10.D  
 Lims ID: 180-71467-C-1  
 Client ID: HD-MW-103D-0/1-0  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 02:08:30 ALS Bottle#: 10 Worklist Smp#: 10  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-010  
 Misc. Info.: 180-71467-C-1  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf Date: 26-Oct-2017 03:08:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	50.8	101.67
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	54.4	108.75
\$ 7 Toluene-d8 (Surr)	50.0	44.0	88.02
\$ 8 4-Bromofluorobenzene (Surr)	50.0	44.8	89.60

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D10.D

Injection Date: 26-Oct-2017 02:08:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-1

Lab Sample ID: 180-71467-1

Client ID: HD-MW-103D-0/1-0

Operator ID: 034635

ALS Bottle#: 10

Worklist Smp#: 10

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

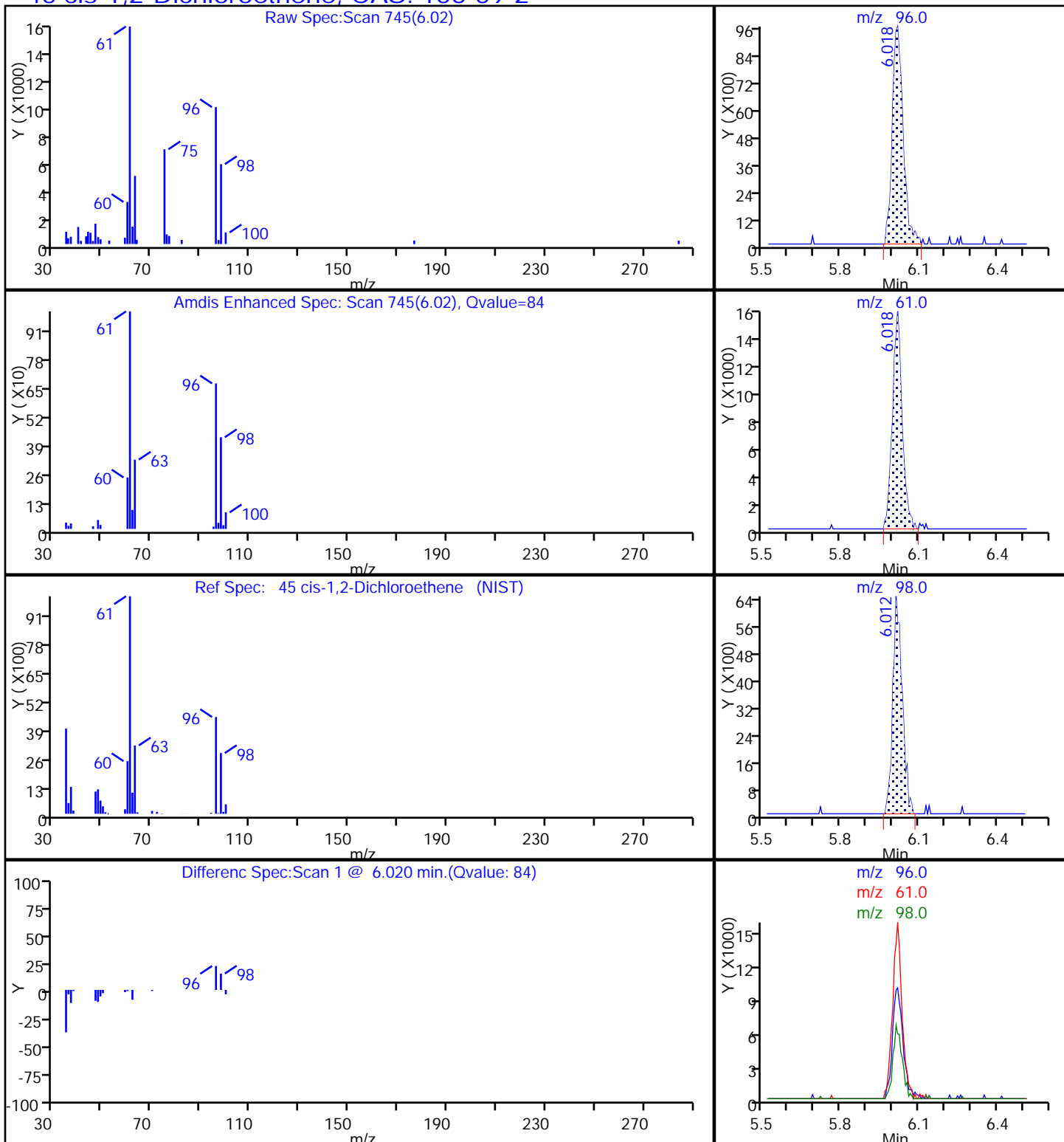
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

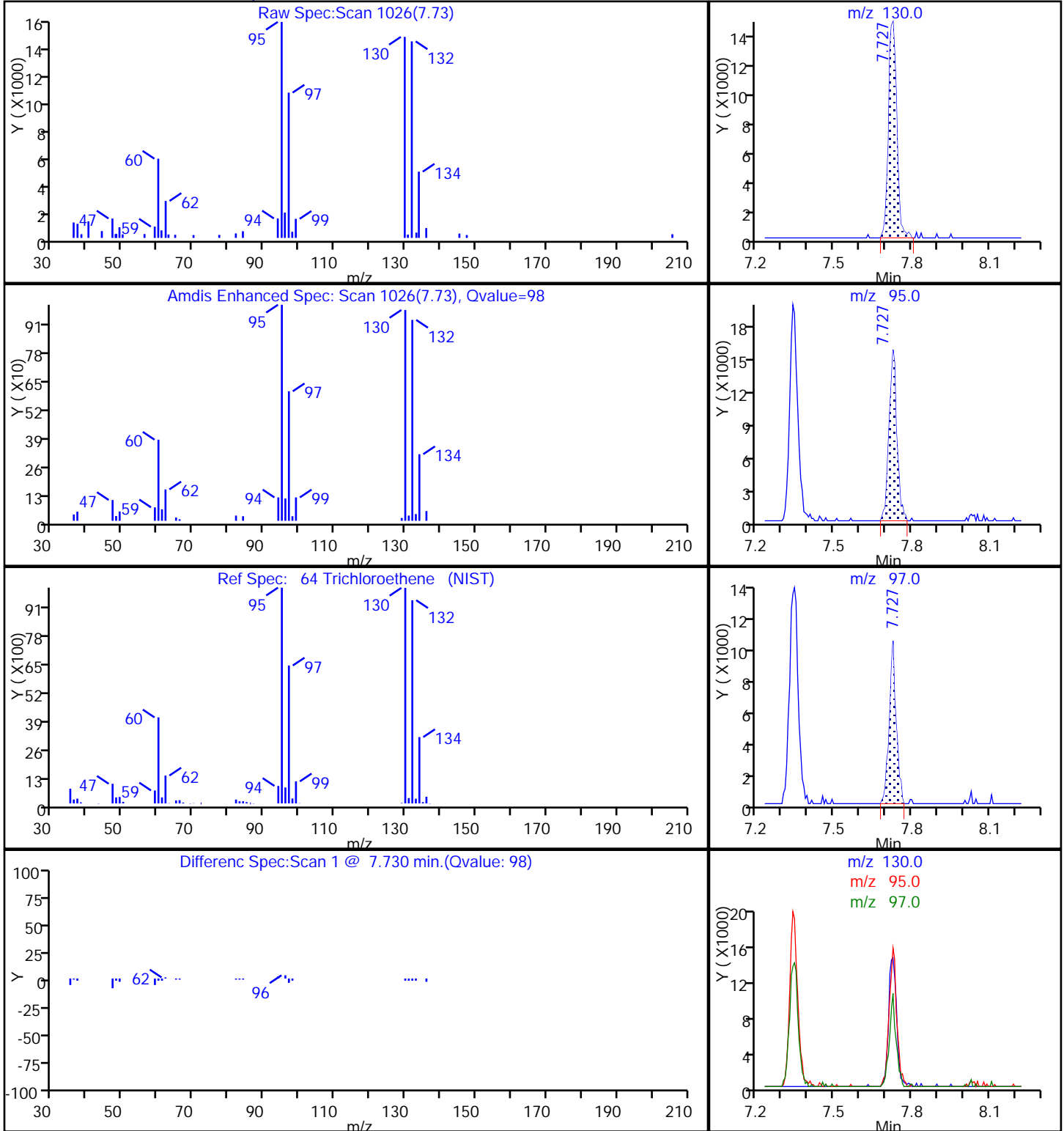
45 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D10.D  
Injection Date: 26-Oct-2017 02:08:30 Instrument ID: CHHP5  
Lims ID: 180-71467-C-1 Lab Sample ID: 180-71467-1  
Client ID: HD-MW-103D-0/1-0  
Operator ID: 034635 ALS Bottle#: 10 Worklist Smp#: 10  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D10.D

Injection Date: 26-Oct-2017 02:08:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-1

Lab Sample ID: 180-71467-1

Client ID: HD-MW-103D-0/1-0

Operator ID: 034635

ALS Bottle#: 10

Worklist Smp#: 10

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

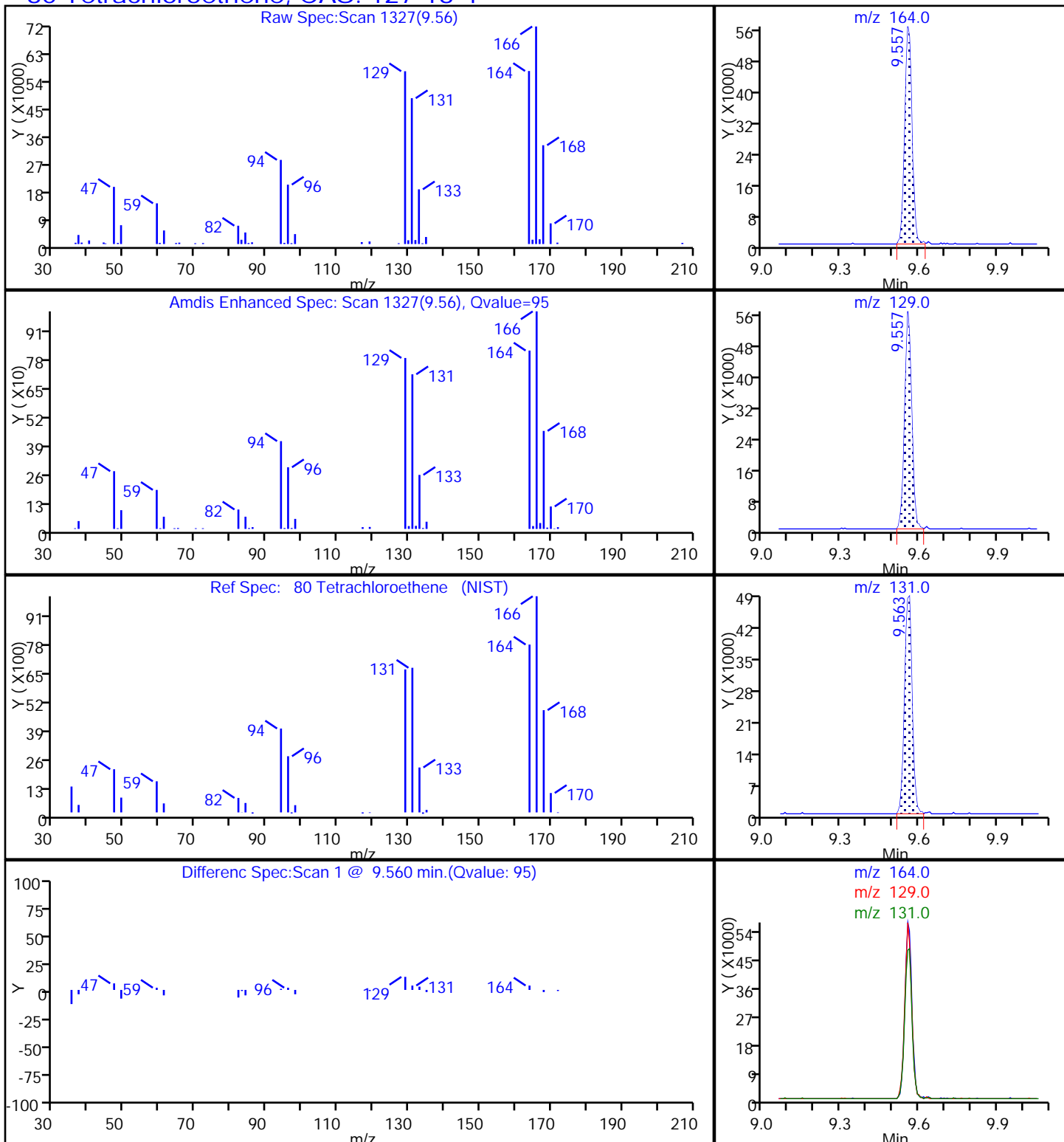
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-103S-0/1-0 Lab Sample ID: 180-71467-2  
 Matrix: Water Lab File ID: 51024D22.D  
 Analysis Method: 8260C Date Collected: 10/16/2017 11:57  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 08:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 5  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	5.0	U ^c	5.0	4.5
75-01-4	Vinyl chloride	5.0	U	5.0	4.4
74-83-9	Bromomethane	5.0	U	5.0	4.4
75-00-3	Chloroethane	5.0	U	5.0	4.5
75-35-4	1,1-Dichloroethene	5.0	U	5.0	2.8
67-64-1	Acetone	25	U	25	17
75-15-0	Carbon disulfide	5.0	U	5.0	4.4
75-09-2	Methylene Chloride	5.0	U	5.0	1.8
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	3.4
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	3.0
75-34-3	1,1-Dichloroethane	5.0	U	5.0	3.1
156-59-2	cis-1,2-Dichloroethene	3.7	J	5.0	3.5
74-97-5	Bromochloromethane	5.0	U	5.0	3.1
78-93-3	2-Butanone (MEK)	25	U	25	13
67-66-3	Chloroform	5.0	U	5.0	3.0
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	3.0
56-23-5	Carbon tetrachloride	5.0	U	5.0	4.4
71-43-2	Benzene	5.0	U	5.0	3.0
107-06-2	1,2-Dichloroethane	5.0	U	5.0	2.9
79-01-6	Trichloroethene	54		5.0	3.4
78-87-5	1,2-Dichloropropane	5.0	U	5.0	3.3
75-27-4	Bromodichloromethane	5.0	U	5.0	3.2
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	3.0
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U	25	15
108-88-3	Toluene	5.0	U	5.0	2.3
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	2.9
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	2.3
127-18-4	Tetrachloroethene	15		5.0	2.3
591-78-6	2-Hexanone	25	U	25	16
124-48-1	Dibromochloromethane	5.0	U	5.0	4.2
106-93-4	1,2-Dibromoethane (EDB)	5.0	U	5.0	2.5
108-90-7	Chlorobenzene	5.0	U	5.0	2.5
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	2.9
100-41-4	Ethylbenzene	5.0	U	5.0	2.5
1330-20-7	Xylenes, Total	10	U	10	4.5
100-42-5	Styrene	5.0	U	5.0	2.4

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-103S-0/1-0 Lab Sample ID: 180-71467-2  
 Matrix: Water Lab File ID: 51024D22.D  
 Analysis Method: 8260C Date Collected: 10/16/2017 11:57  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 08:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 5  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	5.0	U	5.0	4.9
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	3.0
107-13-1	Acrylonitrile	100	U	100	39
123-91-1	1,4-Dioxane	1000	U	1000	68

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		65-121
2037-26-5	Toluene-d8 (Surr)	92		73-120
460-00-4	4-Bromofluorobenzene (Surr)	89		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D22.D  
 Lims ID: 180-71467-C-2  
 Client ID: HD-MW-103S-0/1-0  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 08:03:30 ALS Bottle#: 22 Worklist Smp#: 22  
 Purge Vol: 5.000 mL Dil. Factor: 5.0000  
 Sample Info: 180-0019014-022  
 Misc. Info.: 180-71467-C-2  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 20:43:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.365	4.376	-0.011	0	173068	1000.0	
* 2 Fluorobenzene (IS)	96	7.338	7.331	0.007	98	488424	50.0	
* 3 Chlorobenzene-d5	119	10.428	10.427	0.001	86	124421	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.769	12.768	0.001	96	185822	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.621	6.614	0.007	93	121609	51.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.986	6.985	0.001	0	157630	55.0	
\$ 7 Toluene-d8 (Surr)	98	8.980	8.979	0.001	94	455259	46.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.607	11.613	-0.006	86	158349	44.3	
12 Chloromethane	50		1.895				ND	
13 Vinyl chloride	62		2.010				ND	
15 Bromomethane	94		2.332				ND	
16 Chloroethane	64		2.436				ND	
22 1,1-Dichloroethene	96		3.409				ND	
24 Acetone	43		3.530				ND	
26 Carbon disulfide	76		3.701				ND	
31 Methylene Chloride	84		4.230				ND	
33 Acrylonitrile	53		4.607				ND	
34 trans-1,2-Dichloroethene	96		4.631				ND	
35 Methyl tert-butyl ether	73		4.656				ND	
37 1,1-Dichloroethane	63		5.264				ND	
45 cis-1,2-Dichloroethene	96	6.019	6.006	0.013	77	11429	3.67	
46 2-Butanone (MEK)	43		6.024				ND	
49 Chlorobromomethane	128		6.291				ND	
52 Chloroform	83	6.444	6.437	0.007	80	4074	0.8612	
53 1,1,1-Trichloroethane	97		6.589				ND	
56 Carbon tetrachloride	117		6.766				ND	
58 Benzene	78		6.997				ND	
59 1,2-Dichloroethane	62		7.070				ND	
64 Trichloroethene	130	7.728	7.721	0.007	97	162246	54.3	
67 1,2-Dichloropropane	63		7.994				ND	
70 1,4-Dioxane	88		8.079				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.274				ND	
74 cis-1,3-Dichloropropene	75		8.718				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.870				ND	
76 Toluene	91		9.046				ND	
77 trans-1,3-Dichloropropene	75		9.290				ND	
79 1,1,2-Trichloroethane	97		9.490				ND	
80 Tetrachloroethene	164	9.564	9.557	0.007	95	35393	15.0	
82 2-Hexanone	43		9.703				ND	
84 Chlorodibromomethane	129		9.855				ND	
85 Ethylene Dibromide	107		9.971				ND	
87 Chlorobenzene	112		10.457				ND	
89 1,1,1,2-Tetrachloroethane	131		10.548				ND	
90 Ethylbenzene	106		10.561				ND	
91 m-Xylene & p-Xylene	106		10.688				ND	
92 o-Xylene	106		11.071				ND	
93 Styrene	104		11.090				ND	
94 Bromoform	173		11.272				ND	
99 1,1,2,2-Tetrachloroethane	83		11.752				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D22.D

Injection Date: 25-Oct-2017 08:03:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-C-2

Lab Sample ID: 180-71467-2

Worklist Smp#: 22

Client ID: HD-MW-103S-0/1-0

Purge Vol: 5.000 mL

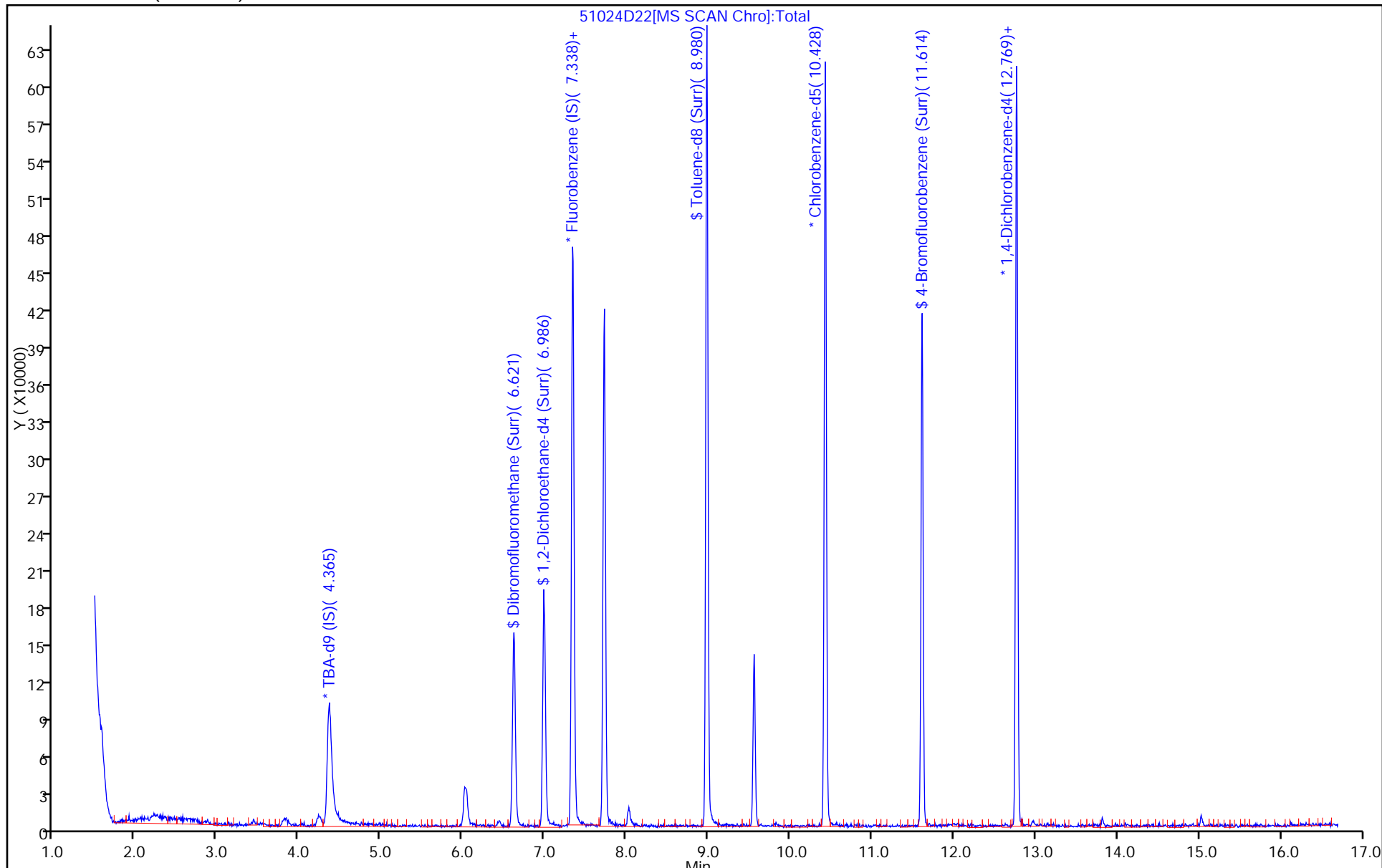
Dil. Factor: 5.0000

ALS Bottle#: 22

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D22.D  
 Lims ID: 180-71467-C-2  
 Client ID: HD-MW-103S-0/1-0  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 08:03:30 ALS Bottle#: 22 Worklist Smp#: 22  
 Purge Vol: 5.000 mL Dil. Factor: 5.0000  
 Sample Info: 180-0019014-022  
 Misc. Info.: 180-71467-C-2  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf Date: 25-Oct-2017 20:43:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	51.7	103.49
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	55.0	109.99
\$ 7 Toluene-d8 (Surr)	50.0	46.0	91.95
\$ 8 4-Bromofluorobenzene (Surr)	50.0	44.3	88.55

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D22.D

Injection Date: 25-Oct-2017 08:03:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-2

Lab Sample ID: 180-71467-2

Client ID: HD-MW-103S-0/1-0

Operator ID: 034635

ALS Bottle#: 22

Worklist Smp#: 22

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

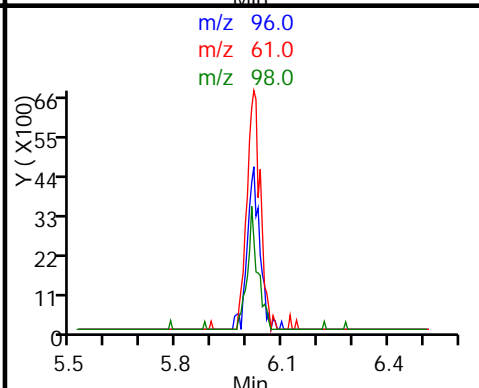
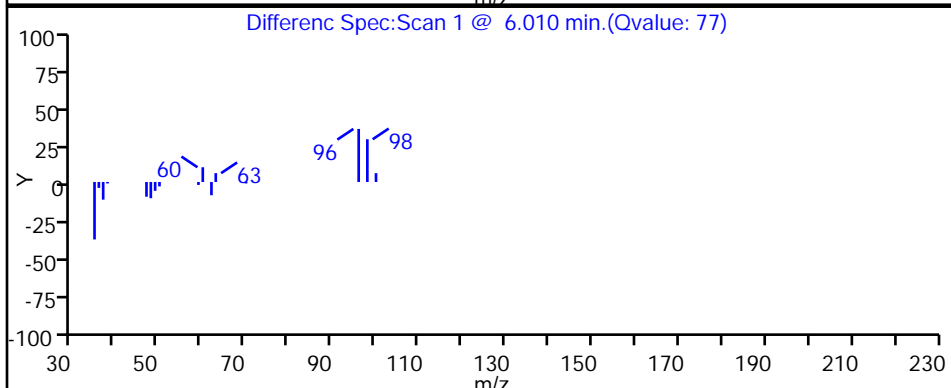
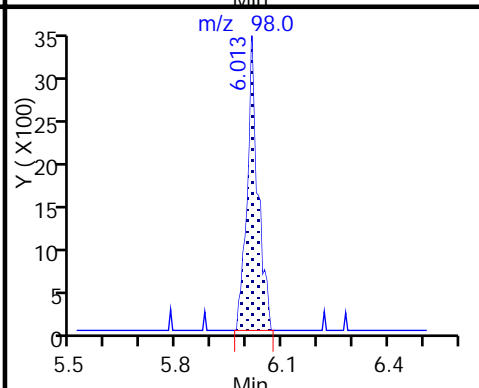
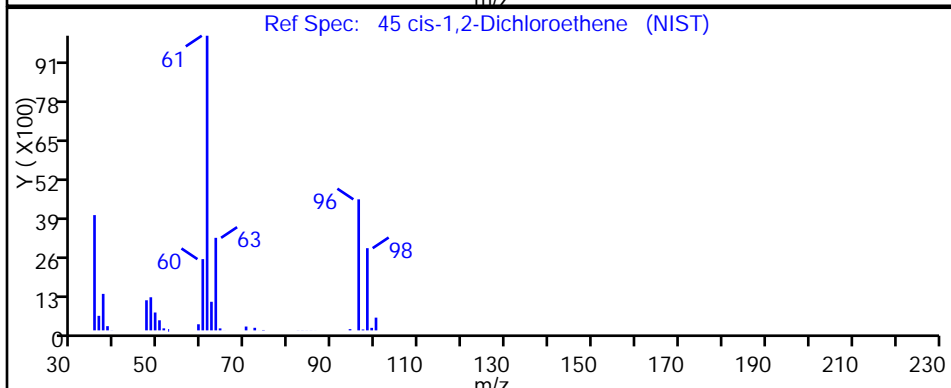
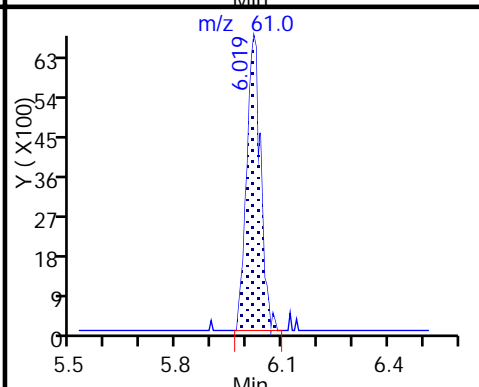
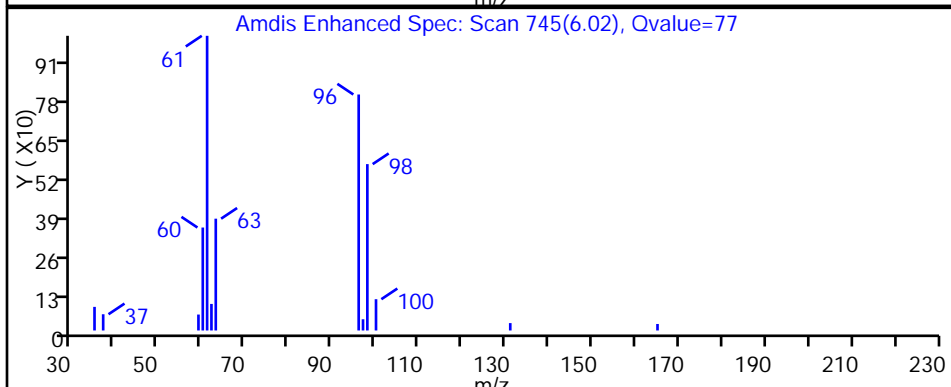
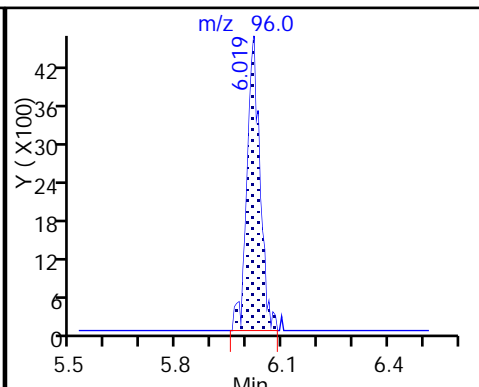
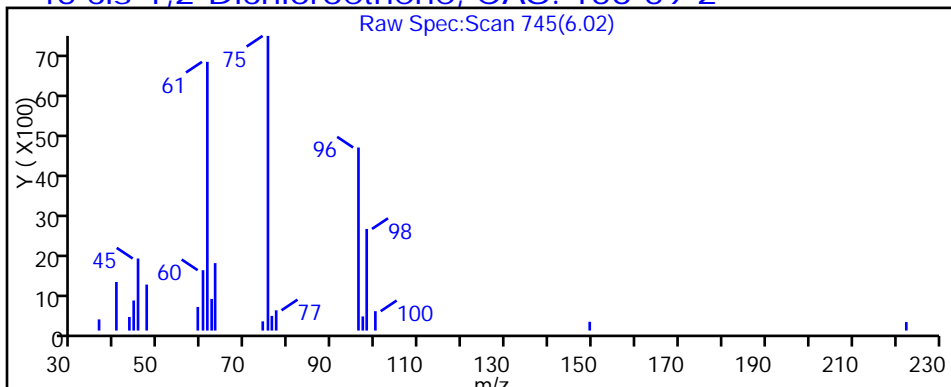
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D22.D

Injection Date: 25-Oct-2017 08:03:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-2

Lab Sample ID: 180-71467-2

Client ID: HD-MW-103S-0/1-0

Operator ID: 034635

ALS Bottle#: 22

Worklist Smp#: 22

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

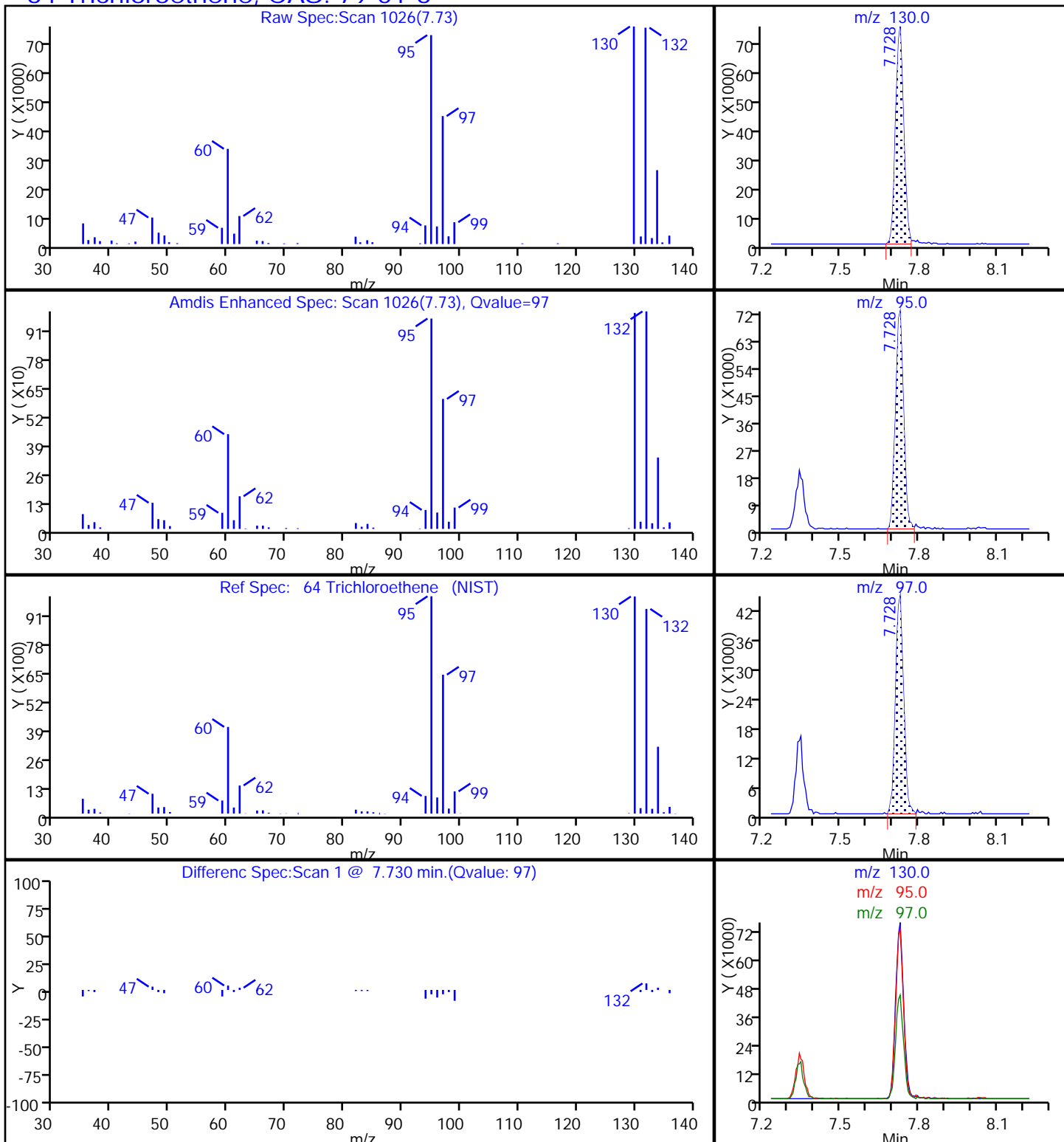
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D22.D

Injection Date: 25-Oct-2017 08:03:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-2

Lab Sample ID: 180-71467-2

Client ID: HD-MW-103S-0/1-0

Operator ID: 034635

ALS Bottle#: 22

Worklist Smp#: 22

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

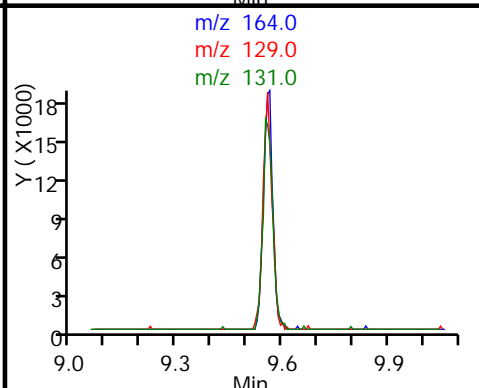
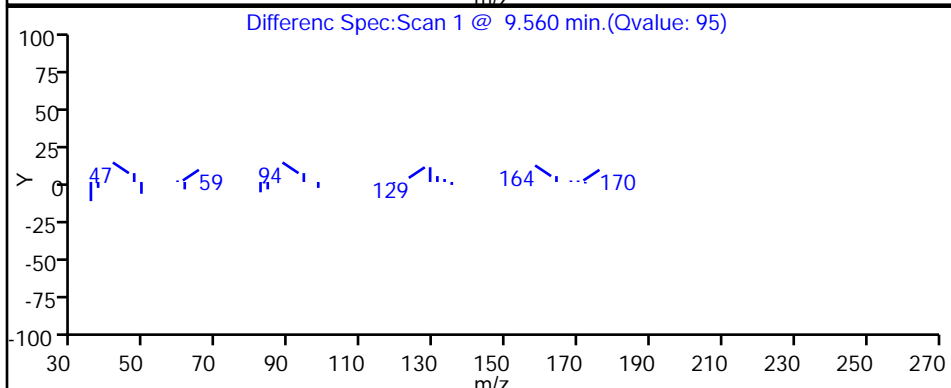
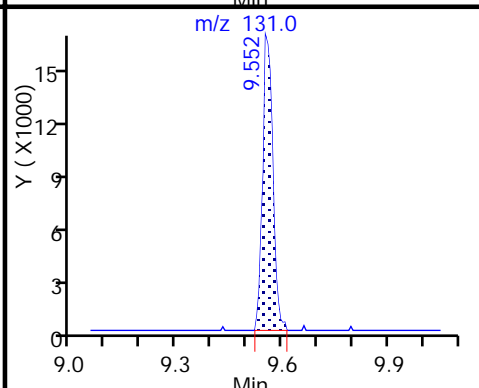
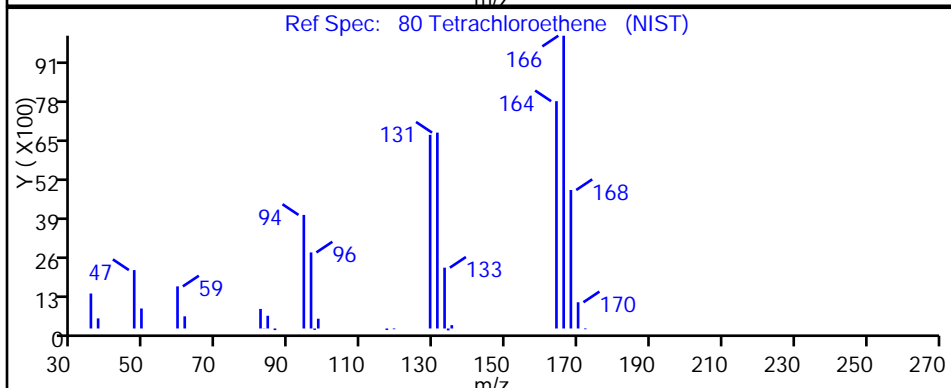
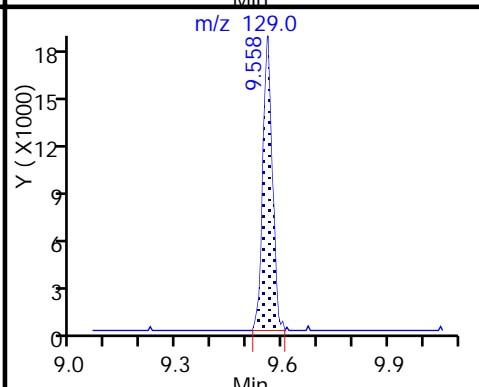
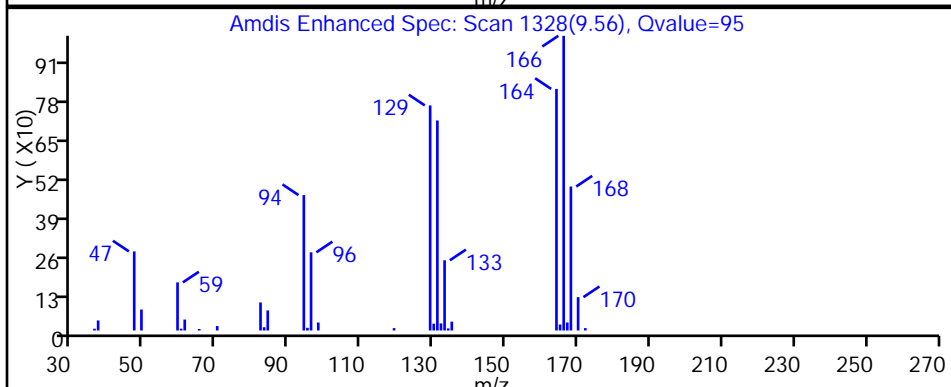
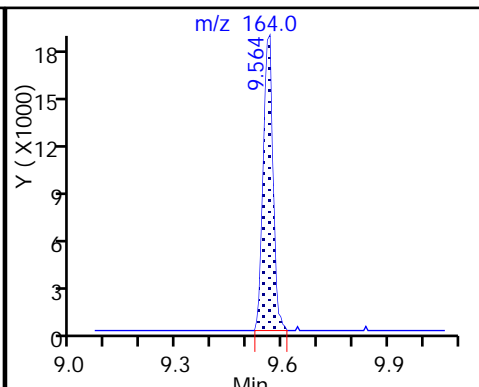
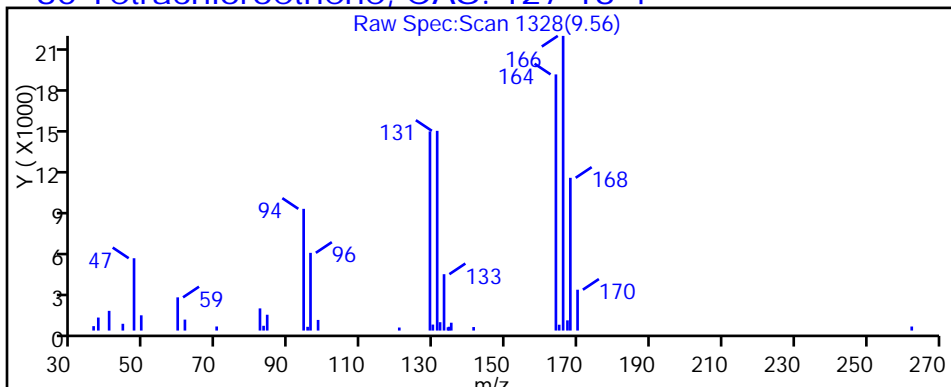
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102D-0/1-0 Lab Sample ID: 180-71467-3  
 Matrix: Water Lab File ID: 51025D11.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 11:45  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 02:31  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U *	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U ^c	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	3.4		1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	2.9		1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	6.9		1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102D-0/1-0 Lab Sample ID: 180-71467-3  
 Matrix: Water Lab File ID: 51025D11.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 11:45  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 02:31  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		65-121
2037-26-5	Toluene-d8 (Surr)	86		73-120
460-00-4	4-Bromofluorobenzene (Surr)	83		80-120
1868-53-7	Dibromofluoromethane (Surr)	104		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D11.D  
 Lims ID: 180-71467-B-3  
 Client ID: HD-MW-102D-0/1-0  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 02:31:30 ALS Bottle#: 11 Worklist Smp#: 11  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-011  
 Misc. Info.: 180-71467-B-3  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 03:09:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.361	4.384	-0.023	0	181977	1000.0	
* 2 Fluorobenzene (IS)	96	7.341	7.340	0.001	98	443165	50.0	
* 3 Chlorobenzene-d5	119	10.430	10.429	0.001	87	116137	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.771	12.770	0.001	97	156178	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.623	6.610	0.013	93	111275	52.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.988	6.987	0.001	0	140809	54.1	
\$ 7 Toluene-d8 (Surr)	98	8.977	8.982	-0.005	94	396260	42.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.610	11.609	0.001	86	137868	41.3	
12 Chloromethane	50		1.891				ND	
13 Vinyl chloride	62		2.012				ND	
15 Bromomethane	94		2.335				ND	
16 Chloroethane	64		2.426				ND	
22 1,1-Dichloroethene	96		3.411				ND	
24 Acetone	43	3.540	3.539	0.001	73	5463	4.71	
26 Carbon disulfide	76		3.703				ND	
31 Methylene Chloride	84		4.226				ND	
33 Acrylonitrile	53		4.609				ND	
34 trans-1,2-Dichloroethene	96		4.640				ND	
35 Methyl tert-butyl ether	73	4.677	4.664	0.013	56	4151	0.6262	
37 1,1-Dichloroethane	63		5.266				ND	
45 cis-1,2-Dichloroethene	96	6.021	6.008	0.013	78	48293	17.1	
46 2-Butanone (MEK)	43		6.026				ND	
49 Chlorobromomethane	128		6.288				ND	
52 Chloroform	83	6.441	6.434	0.007	93	9700	2.26	
53 1,1,1-Trichloroethane	97		6.592				ND	
56 Carbon tetrachloride	117		6.762				ND	
58 Benzene	78		6.993				ND	
59 1,2-Dichloroethane	62		7.072				ND	
64 Trichloroethene	130	7.730	7.723	0.007	96	38645	14.3	
67 1,2-Dichloropropane	63		7.997				ND	
70 1,4-Dioxane	88		8.082				ND	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.276				ND	
74 cis-1,3-Dichloropropene	75		8.720				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.872				ND	
76 Toluene	91		9.049				ND	
77 trans-1,3-Dichloropropene	75		9.298				ND	
79 1,1,2-Trichloroethane	97		9.486				ND	
80 Tetrachloroethene	164	9.560	9.559	0.001	96	76467	34.6	
82 2-Hexanone	43		9.705				ND	
84 Chlorodibromomethane	129		9.857				ND	
85 Ethylene Dibromide	107		9.967				ND	
87 Chlorobenzene	112		10.459				ND	
89 1,1,1,2-Tetrachloroethane	131		10.551				ND	
90 Ethylbenzene	106		10.557				ND	
91 m-Xylene & p-Xylene	106		10.684				ND	
92 o-Xylene	106		11.068				ND	
93 Styrene	104		11.092				ND	
94 Bromoform	173		11.274				ND	
99 1,1,2,2-Tetrachloroethane	83		11.749				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D11.D

Injection Date: 26-Oct-2017 02:31:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-B-3

Lab Sample ID: 180-71467-3

Worklist Smp#: 11

Client ID: HD-MW-102D-0/1-0

Purge Vol: 5.000 mL

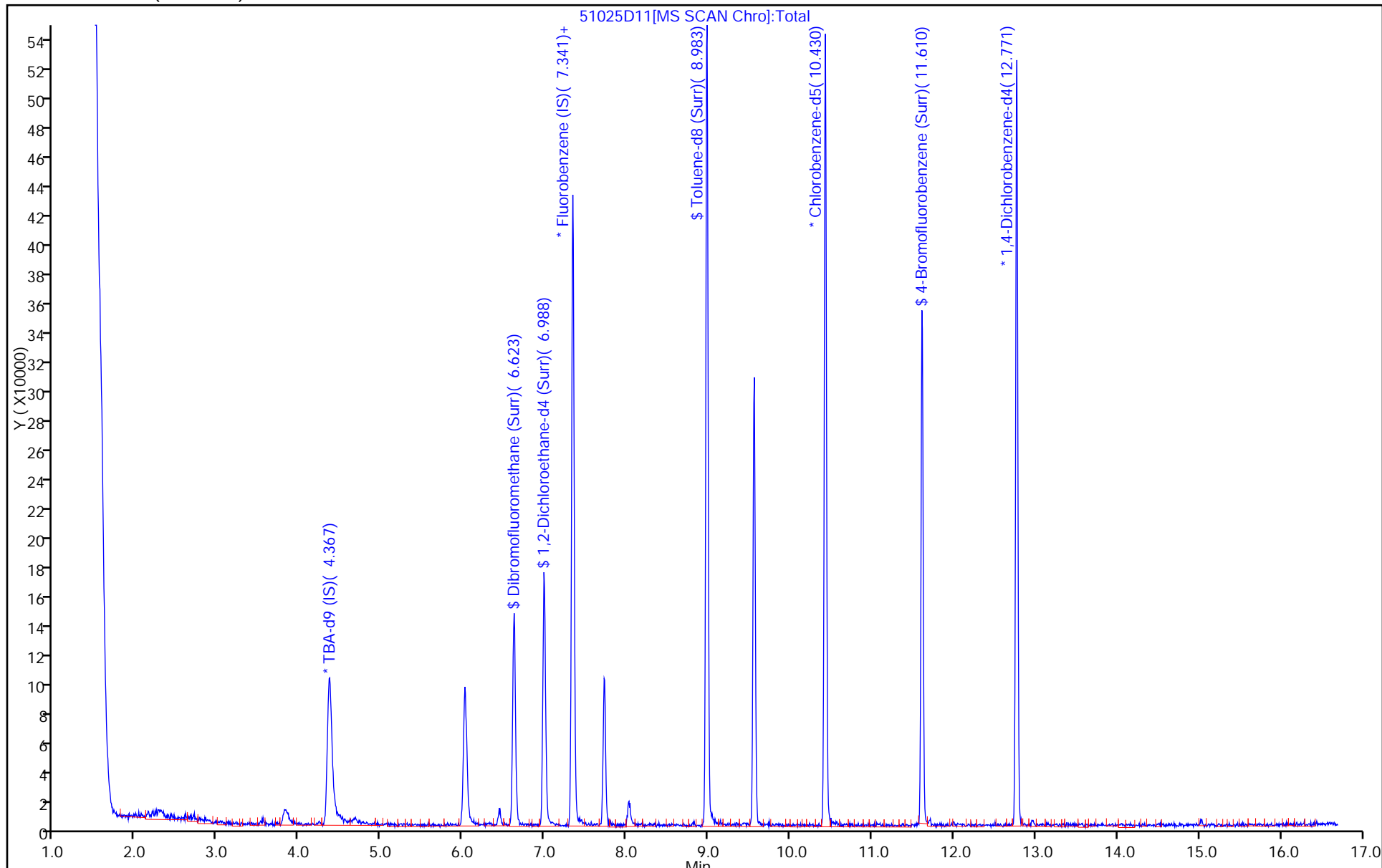
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D11.D  
 Lims ID: 180-71467-B-3  
 Client ID: HD-MW-102D-0/1-0  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 02:31:30 ALS Bottle#: 11 Worklist Smp#: 11  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-011  
 Misc. Info.: 180-71467-B-3  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf Date: 26-Oct-2017 03:09:20

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	52.2	104.37
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	54.1	108.29
\$ 7 Toluene-d8 (Surr)	50.0	42.9	85.74
\$ 8 4-Bromofluorobenzene (Surr)	50.0	41.3	82.60

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D11.D

Injection Date: 26-Oct-2017 02:31:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-3

Lab Sample ID: 180-71467-3

Client ID: HD-MW-102D-0/1-0

Operator ID: 034635

ALS Bottle#: 11

Worklist Smp#: 11

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

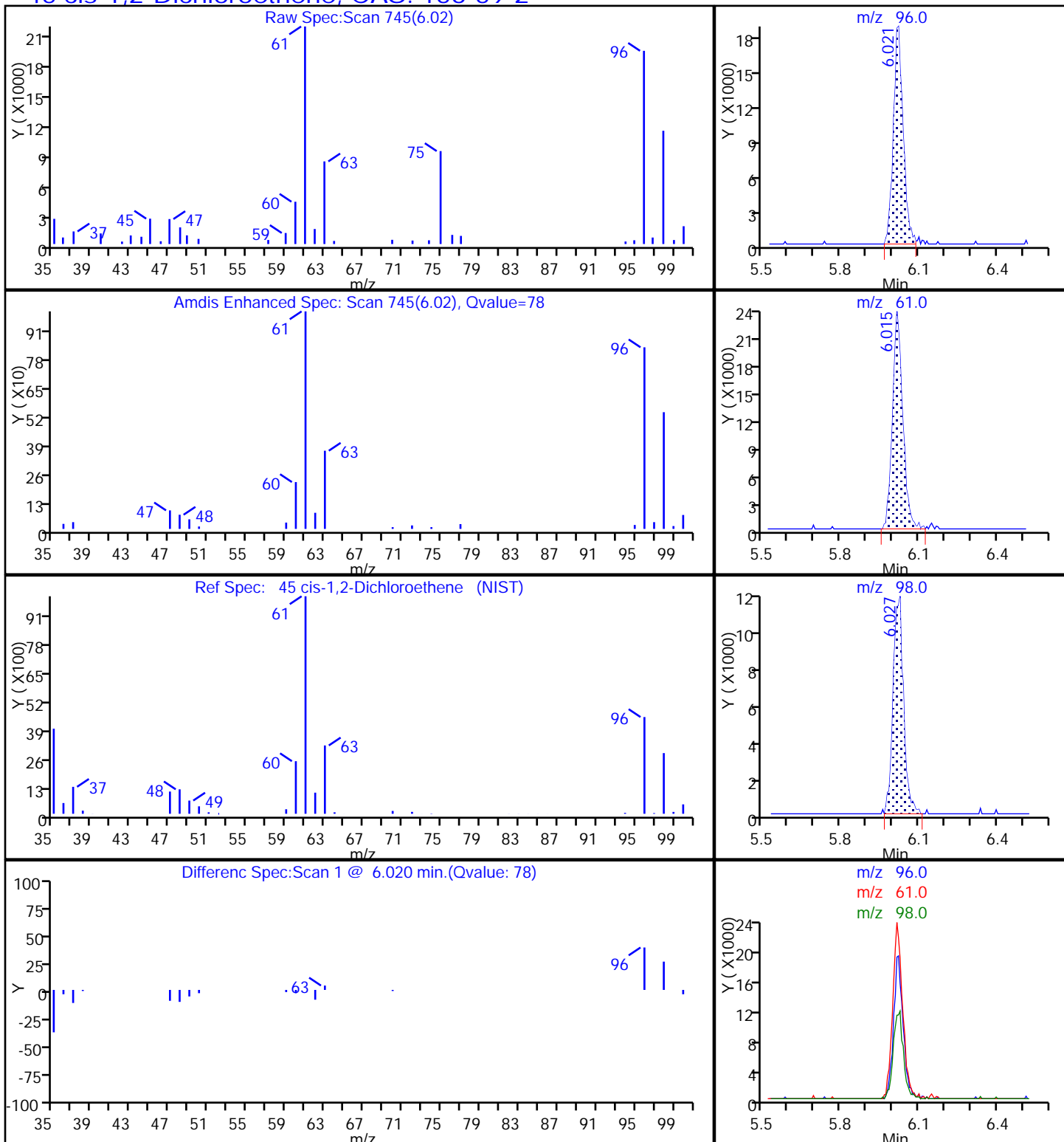
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D11.D

Injection Date: 26-Oct-2017 02:31:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-3

Lab Sample ID: 180-71467-3

Client ID: HD-MW-102D-0/1-0

Operator ID: 034635

ALS Bottle#: 11

Worklist Smp#: 11

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

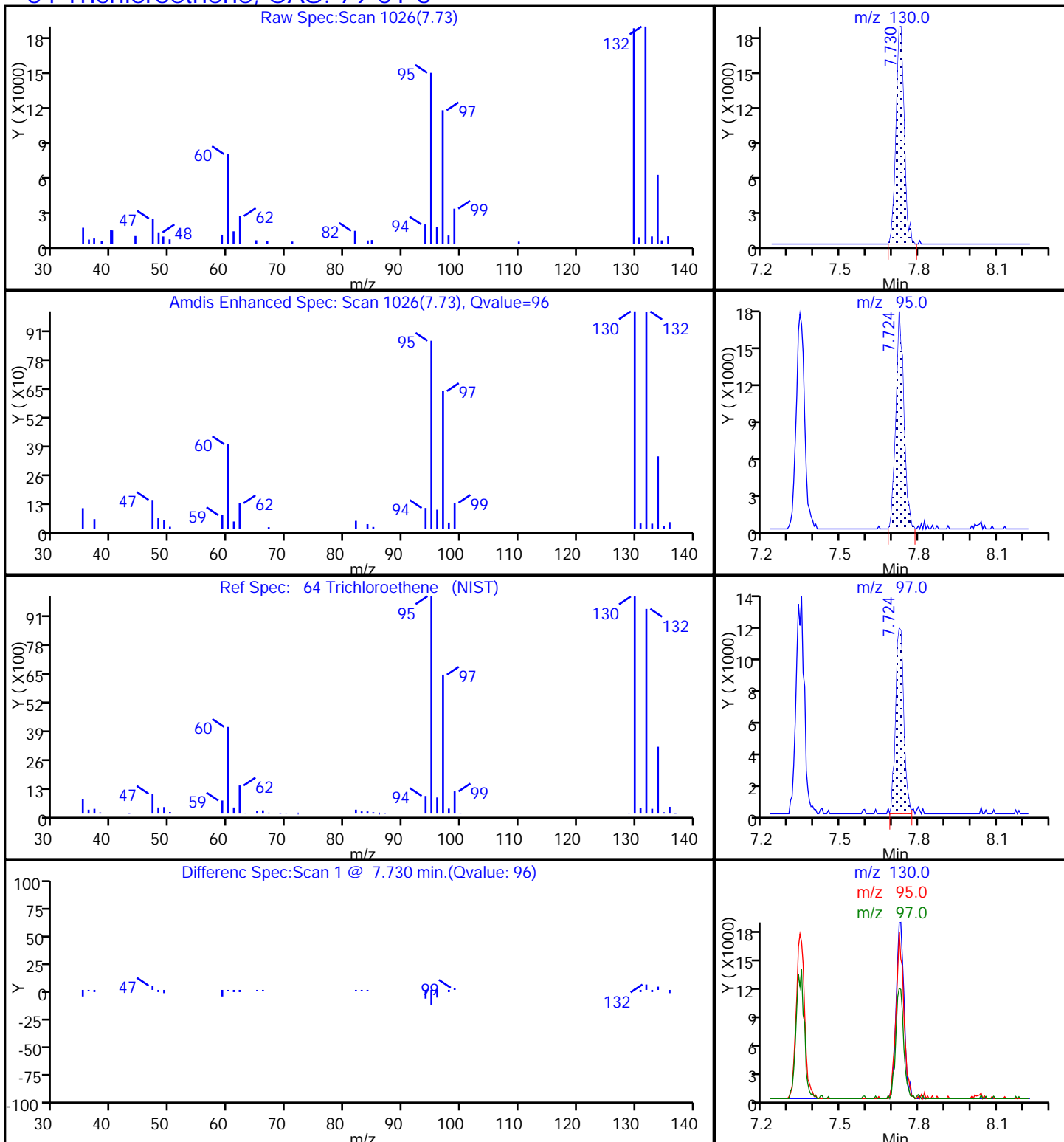
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D11.D

Injection Date: 26-Oct-2017 02:31:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-3

Lab Sample ID: 180-71467-3

Client ID: HD-MW-102D-0/1-0

Operator ID: 034635

ALS Bottle#: 11

Worklist Smp#: 11

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

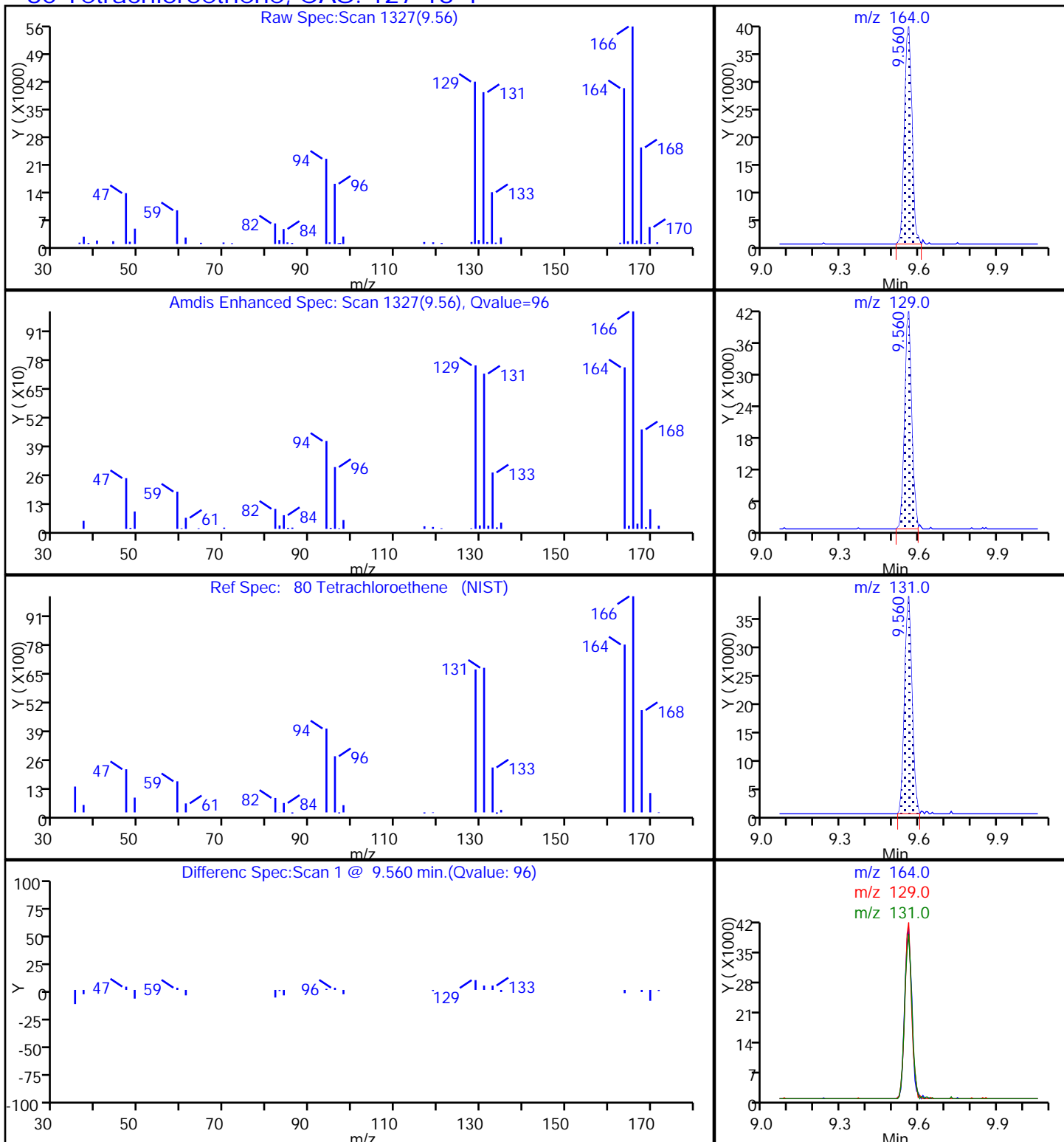
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102S-0/1-0 Lab Sample ID: 180-71467-4  
 Matrix: Water Lab File ID: 51025D06.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:08  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 00:27  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U *	1.0	0.90
			F1		
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U ^c	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	4.6		1.0	0.55
67-64-1	Acetone	5.0	U F1	5.0	3.4
			F2		
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.2		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	6.0		1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	4.6		1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	24	F1	1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	13		1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102S-0/1-0 Lab Sample ID: 180-71467-4  
 Matrix: Water Lab File ID: 51025D06.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:08  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 00:27  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-42-5	Styrene	1.0	U	1.0	0.47
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		65-121
2037-26-5	Toluene-d8 (Surr)	92		73-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
1868-53-7	Dibromofluoromethane (Surr)	107		73-120



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D  
 Lims ID: 180-71467-B-4  
 Client ID: HD-MW-102S-0/1-0  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 00:27:30 ALS Bottle#: 6 Worklist Smp#: 6  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-006  
 Misc. Info.: 180-71467-B-4  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 00:53:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.360	4.384	-0.024	0	215329	1000.0	
* 2 Fluorobenzene (IS)	96	7.340	7.340	0.000	98	480041	50.0	
* 3 Chlorobenzene-d5	119	10.429	10.429	0.000	87	121057	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.771	12.770	0.001	96	172988	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.623	6.610	0.013	93	123654	53.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.993	6.987	0.006	0	153989	54.7	
\$ 7 Toluene-d8 (Surr)	98	8.982	8.982	0.000	95	441649	45.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.615	11.609	0.006	85	156166	44.9	
11 Dichlorodifluoromethane	85		1.684				ND	
12 Chloromethane	50		1.891				ND	
14 Butadiene	39		2.012				ND	
13 Vinyl chloride	62		2.012				ND	
15 Bromomethane	94		2.335				ND	
16 Chloroethane	64		2.426				ND	
17 Dichlorofluoromethane	67		2.760				ND	
18 Trichlorofluoromethane	101		2.791				ND	
19 Ethanol	45		2.821				ND	
20 Ethyl ether	59		3.131				ND	
21 Acrolein	56		3.314				ND	
22 1,1-Dichloroethene	96	3.448	3.411	0.037	95	54045	23.0	
23 1,1,2-Trichloro-1,2,2-trif	101		3.496				ND	
24 Acetone	43		3.539				ND	
25 Iodomethane	142		3.612				ND	
26 Carbon disulfide	76		3.703				ND	
27 Isopropyl alcohol	45	3.831	3.816	0.015	98	80637	431.9	
29 Acetonitrile	41		3.981				ND	
28 3-Chloro-1-propene	76		4.001				ND	
30 Methyl acetate	43		4.038				ND	
31 Methylene Chloride	84		4.226				ND	
32 2-Methyl-2-propanol	59		4.506				ND	
33 Acrylonitrile	53		4.609				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.640				ND	
35 Methyl tert-butyl ether	73		4.664				ND	
36 Hexane	57		5.053				ND	
37 1,1-Dichloroethane	63	5.279	5.266	0.013	96	28642	6.15	
38 Vinyl acetate	43		5.321				ND	
41 Isopropyl ether	45		5.367				ND	
39 2-Chloro-1,3-butadiene	53		5.367				ND	
40 Isopropyl ether TIC	45		5.410				ND	
42 Tert-butyl ethyl ether	59		5.835				ND	
43 Tert-butyl ethyl ether (TI	59		5.961				ND	
44 2,2-Dichloropropane	97		6.008				ND	
45 cis-1,2-Dichloroethene	96	6.014	6.008	0.006	81	92437	30.2	
46 2-Butanone (MEK)	43		6.026				ND	
48 Ethyl acetate	43		6.097				ND	
47 Propionitrile	54		6.103				ND	
50 Methacrylonitrile	41		6.273				ND	
49 Chlorobromomethane	128		6.288				ND	
51 Tetrahydrofuran	42		6.306				ND	
52 Chloroform	83	6.446	6.434	0.012	19	1876	0.4035	
53 1,1,1-Trichloroethane	97	6.598	6.592	0.006	98	81602	23.2	
54 Cyclohexane	56		6.659				ND	
56 Carbon tetrachloride	117		6.762				ND	
55 1,1-Dichloropropene	75		6.780				ND	
57 Isobutyl alcohol	41		6.987				ND	
58 Benzene	78		6.993				ND	
59 1,2-Dichloroethane	62		7.072				ND	
151 Isooctane	57		7.149				ND	
61 Tert-amyl methyl ether	73		7.173				ND	
60 Tert-amyl methyl ether (TI	73		7.262				ND	
62 n-Heptane	43		7.352				ND	
63 n-Butanol	56		7.684				ND	
64 Trichloroethene	130	7.729	7.723	0.006	98	353329	120.3	
65 Ethyl acrylate	55		7.848				ND	
66 Methylcyclohexane	83		7.960				ND	
67 1,2-Dichloropropane	63		7.997				ND	
70 1,4-Dioxane	88		8.082				ND	
69 Methyl methacrylate	69		8.086				ND	
68 Dibromomethane	93		8.088				ND	
71 Dichlorobromomethane	83		8.276				ND	
73 2-Chloroethyl vinyl ether	63		8.574				ND	
74 cis-1,3-Dichloropropene	75		8.720				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.872				ND	
76 Toluene	91		9.049				ND	
77 trans-1,3-Dichloropropene	75		9.298				ND	
78 Ethyl methacrylate	69		9.353				ND	
79 1,1,2-Trichloroethane	97		9.486				ND	
80 Tetrachloroethene	164	9.560	9.559	0.001	96	146113	63.5	
81 1,3-Dichloropropane	76		9.645				ND	
82 2-Hexanone	43		9.705				ND	
83 n-Butyl acetate	43		9.825				ND	
84 Chlorodibromomethane	129		9.857				ND	
85 Ethylene Dibromide	107		9.967				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.435				ND	
87 Chlorobenzene	112		10.459				ND	
88 4-Chlorobenzotrifluoride	180		10.520				ND	
89 1,1,1,2-Tetrachloroethane	131		10.551				ND	
90 Ethylbenzene	106		10.557				ND	
91 m-Xylene & p-Xylene	106		10.684				ND	
92 o-Xylene	106		11.068				ND	
93 Styrene	104		11.092				ND	
94 Bromoform	173		11.274				ND	
95 Cyclohexanol	57		11.288				ND	
96 2-Chlorobenzotrifluoride	180		11.341				ND	
97 Isopropylbenzene	105		11.439				ND	
98 Cyclohexanone	55		11.528				ND	
100 Bromobenzene	156		11.749				ND	
99 1,1,2,2-Tetrachloroethane	83		11.749				ND	
102 trans-1,4-Dichloro-2-buten	53		11.785				ND	
101 1,2,3-Trichloropropane	110		11.803				ND	
103 N-Propylbenzene	120		11.852				ND	
104 2-Chlorotoluene	126		11.943				ND	
105 3-Chlorotoluene	126		12.004				ND	
106 1,3,5-Trimethylbenzene	105		12.035				ND	
107 4-Chlorotoluene	126		12.065				ND	
108 tert-Butylbenzene	119		12.351				ND	
110 1,2,4-Trimethylbenzene	105		12.412				ND	
111 1,2-dichloro-4-(trifluorom	214		12.454				ND	
112 sec-Butylbenzene	105		12.576				ND	
113 1,3-Dichlorobenzene	146		12.691				ND	
114 4-Isopropyltoluene	119		12.728				ND	
115 1,4-Dichlorobenzene	146		12.795				ND	
116 2,4-Dichloro-1-(triflourom	214		12.819				ND	
117 1,2,3-Trimethylbenzene	105		12.823				ND	
118 2,5-Dichlorobenzotrifluori	214		12.862				ND	
119 Benzyl chloride	91		12.908				ND	
120 n-Butylbenzene	91		13.141				ND	
121 1,2-Dichlorobenzene	146		13.147				ND	
122 1,2-Dibromo-3-Chloropropan	75		13.938				ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.084				ND	
124 1,3,5-Trichlorobenzene	180		14.130				ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.504				ND	
126 1,2,4-Trichlorobenzene	180		14.765				ND	
127 Hexachlorobutadiene	225		14.911				ND	
128 Naphthalene	128	15.033	15.033	0.000	95	6269	0.7034	
129 1,2,3-Trichlorobenzene	180		15.258				ND	
131 2,4,5-Trichlorotoluene	159		16.024				ND	
130 2,3,6-Trichlorotoluene	159		16.121				ND	
149 3,4-Dichlorotoluene	1		0.000				ND	
152 Formaldehyde TIC	1		0.000				ND	
S 154 Total BTEX	106		1.000				ND	
S 134 1,2-Dichloroethene, Total	96				0		30.2	
S 133 Xylenes, Total	106		1.000				ND	
S 135 1,3-Dichloropropene, Total	1		0.000				ND	
T 138 Methyl n-amyl ketone TIC	43		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
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T 136 Mesityl oxide TIC	83		0.000				ND	
T 153 1,2 Epoxybutane TIC	42		6.253				ND	
T 137 Tetrahydrofuran TIC	42		6.253				ND	

**Reagents:**

VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D

Injection Date: 26-Oct-2017 00:27:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-B-4

Lab Sample ID: 180-71467-4

Worklist Smp#: 6

Client ID: HD-MW-102S-0/1-0

Purge Vol: 5.000 mL

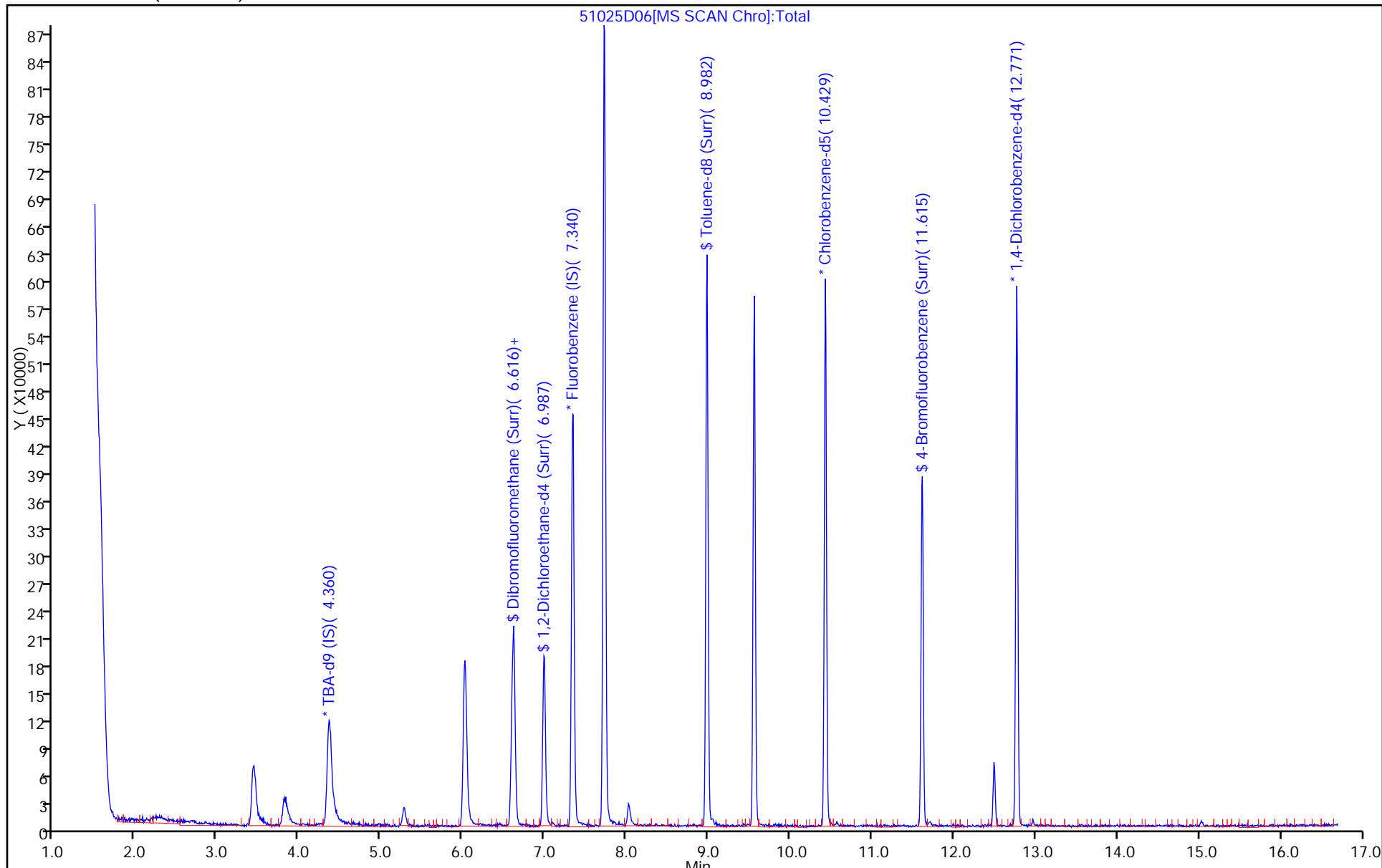
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D  
 Lims ID: 180-71467-B-4  
 Client ID: HD-MW-102S-0/1-0  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 00:27:30 ALS Bottle#: 6 Worklist Smp#: 6  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-006  
 Misc. Info.: 180-71467-B-4  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf Date: 26-Oct-2017 00:53:22

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	53.5	107.07
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	54.7	109.33
\$ 7 Toluene-d8 (Surr)	50.0	45.8	91.68
\$ 8 4-Bromofluorobenzene (Surr)	50.0	44.9	89.76

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D

Injection Date: 26-Oct-2017 00:27:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-4

Lab Sample ID: 180-71467-4

Client ID: HD-MW-102S-0/1-0

Operator ID: 034635

ALS Bottle#: 6

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

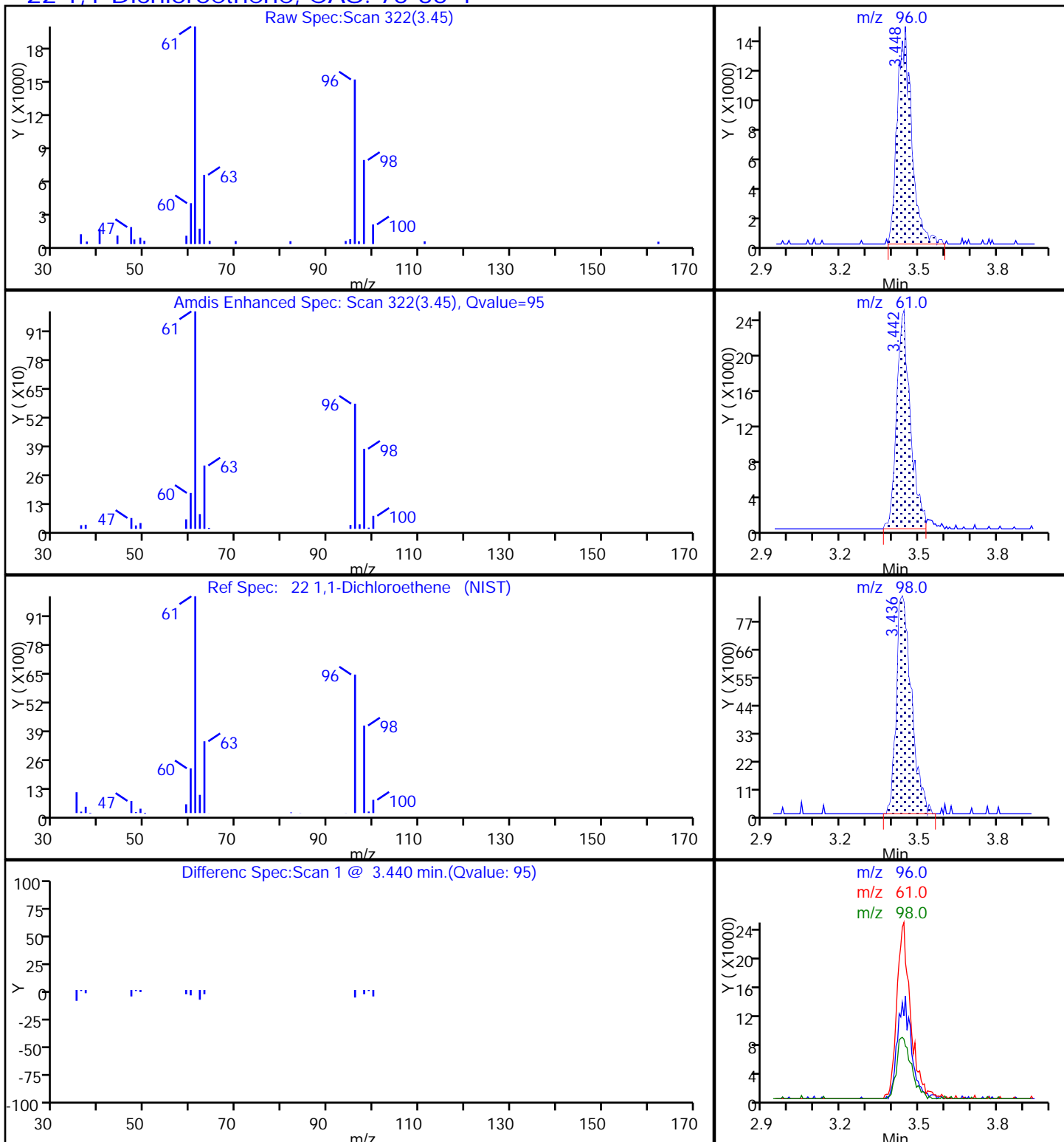
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D

Injection Date: 26-Oct-2017 00:27:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-4

Lab Sample ID: 180-71467-4

Client ID: HD-MW-102S-0/1-0

Operator ID: 034635

ALS Bottle#: 6

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

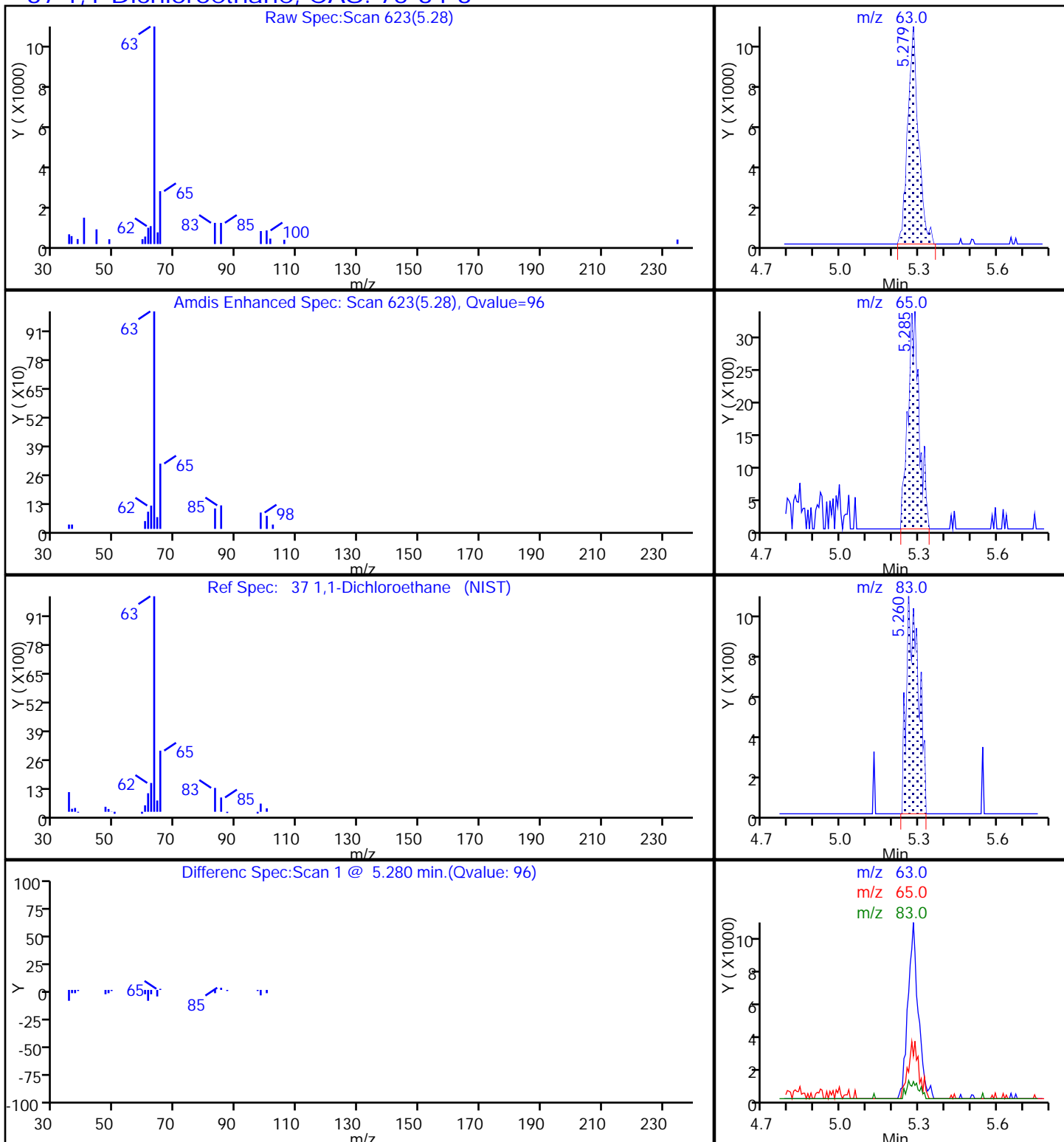
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3





TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D

Injection Date: 26-Oct-2017 00:27:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-4

Lab Sample ID: 180-71467-4

Client ID: HD-MW-102S-0/1-0

Operator ID: 034635

ALS Bottle#: 6

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

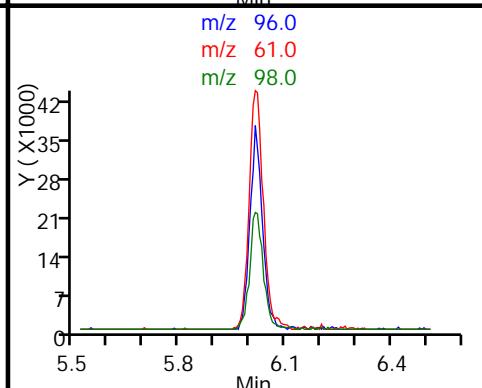
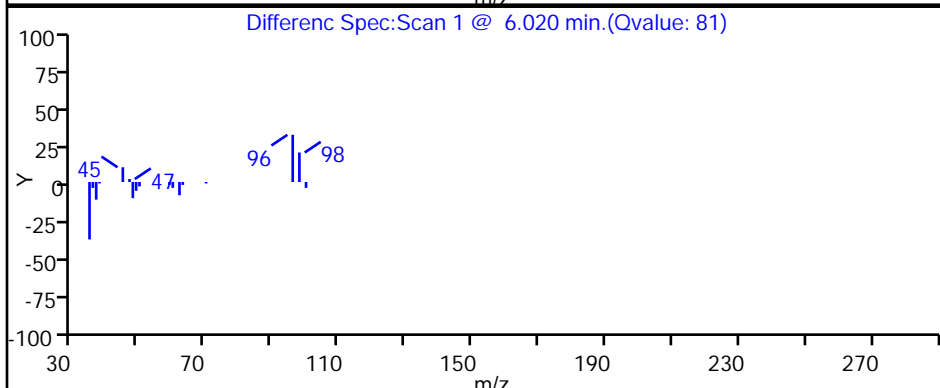
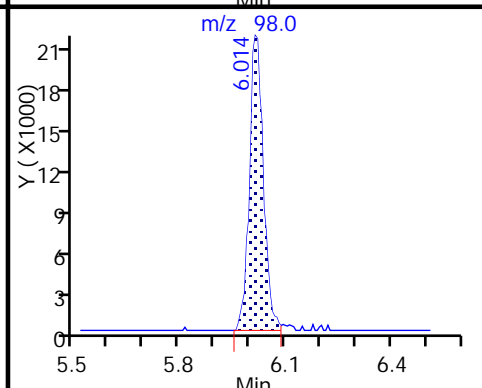
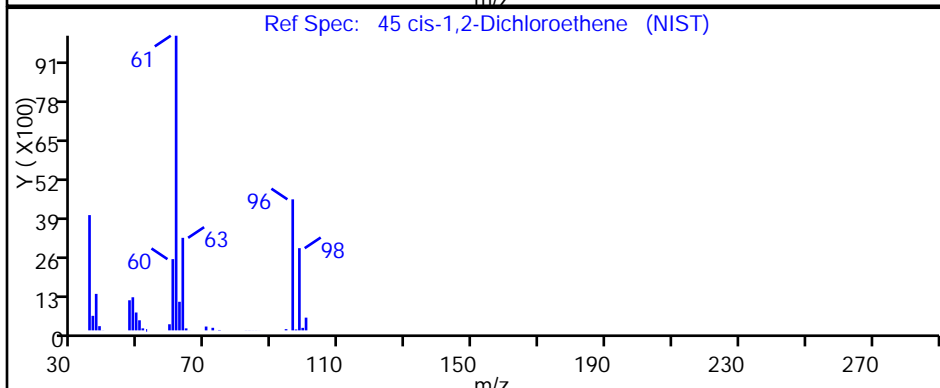
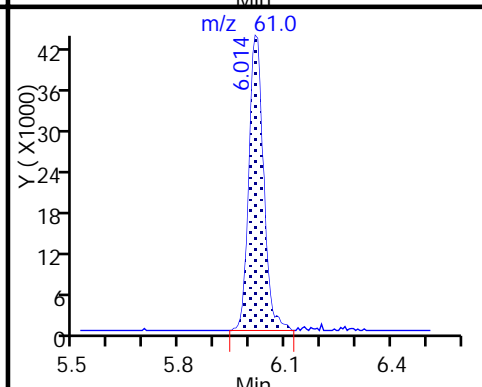
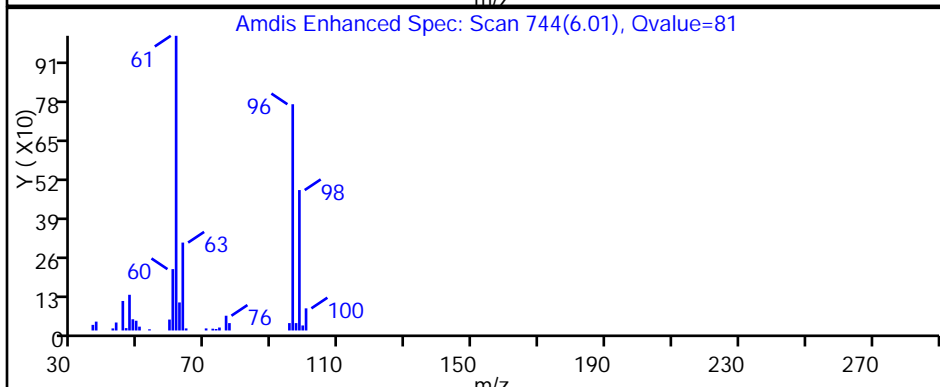
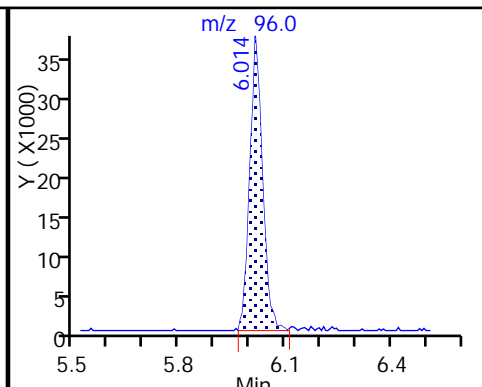
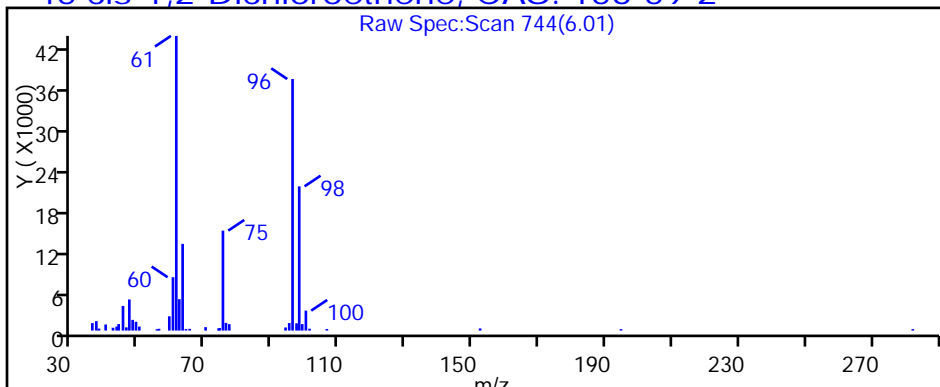
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D

Injection Date: 26-Oct-2017 00:27:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-4

Lab Sample ID: 180-71467-4

Client ID: HD-MW-102S-0/1-0

Operator ID: 034635

ALS Bottle#: 6

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

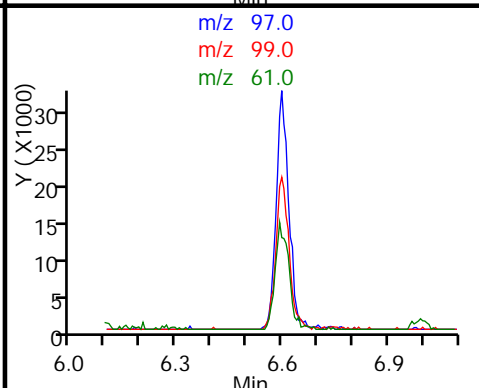
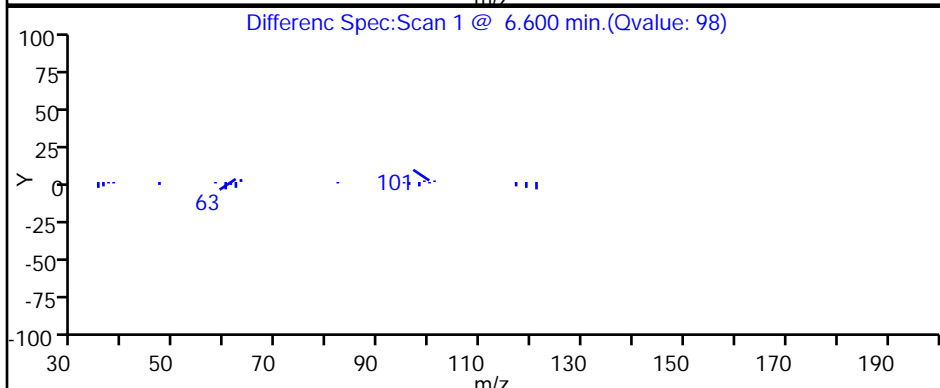
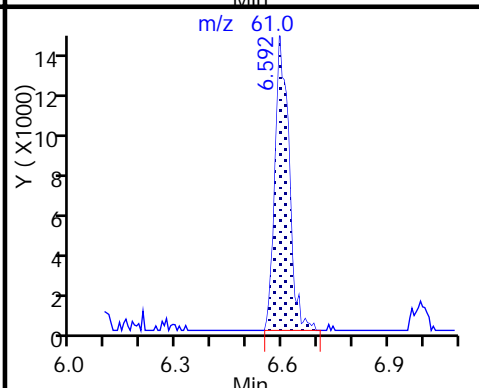
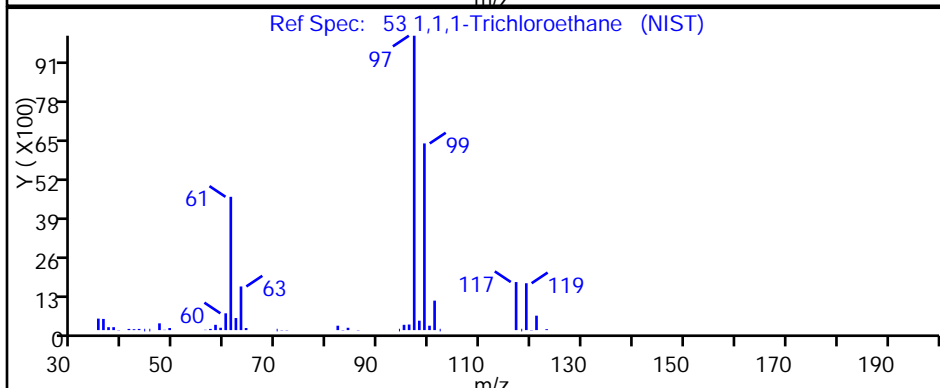
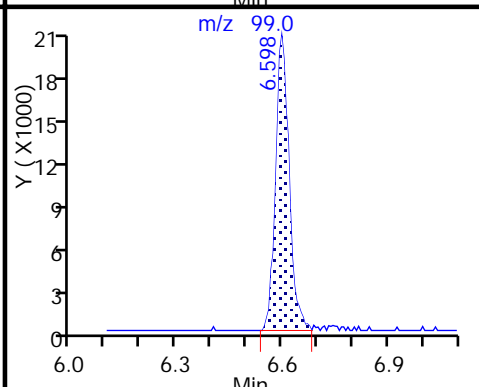
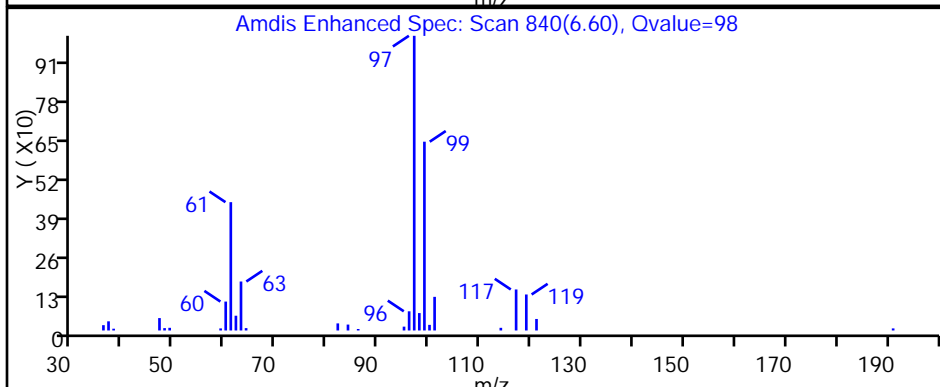
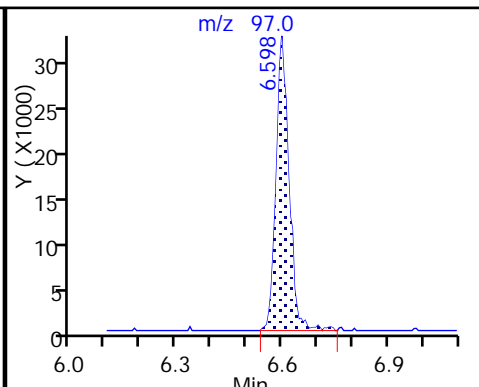
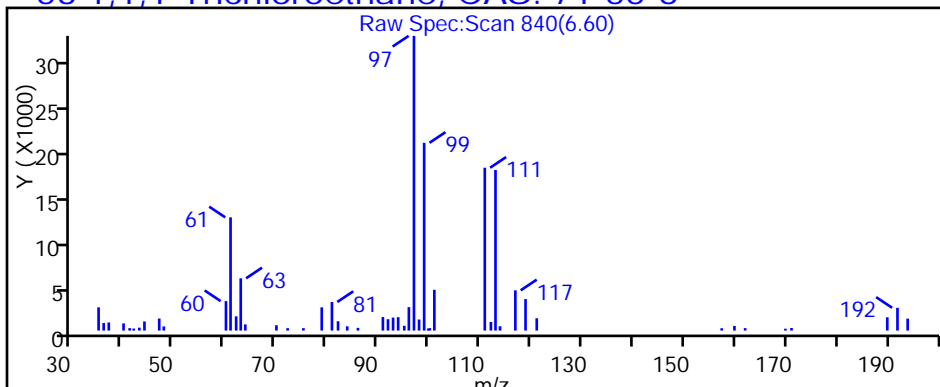
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

53 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D

Injection Date: 26-Oct-2017 00:27:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-4

Lab Sample ID: 180-71467-4

Client ID: HD-MW-102S-0/1-0

Operator ID: 034635

ALS Bottle#: 6

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

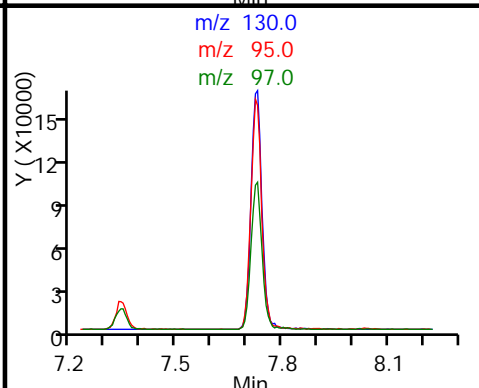
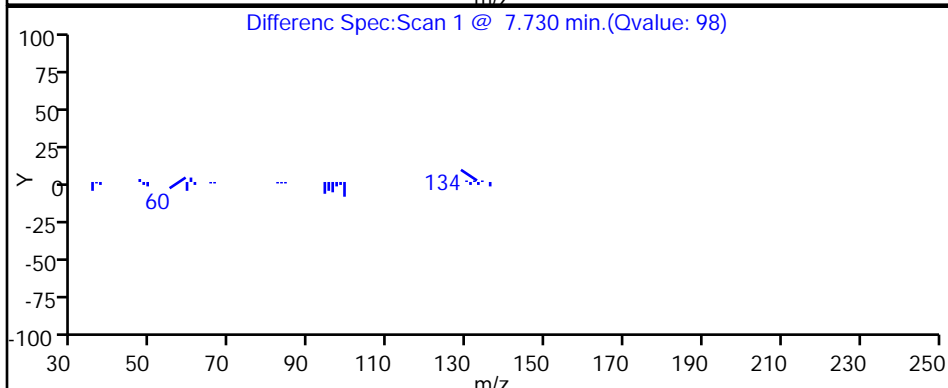
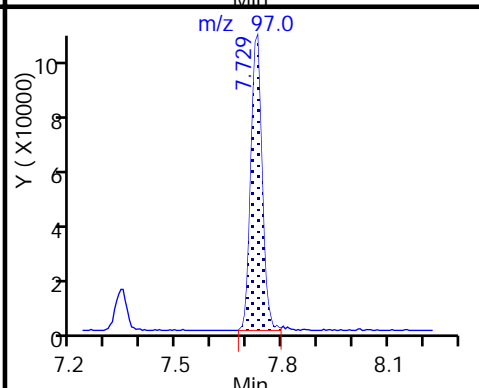
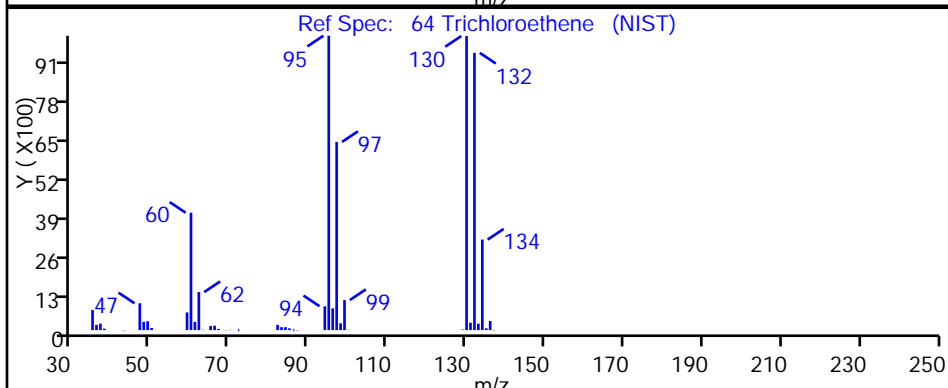
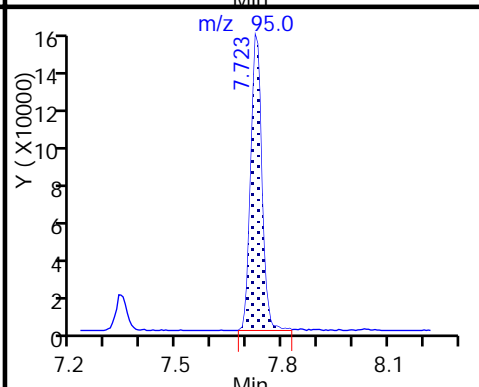
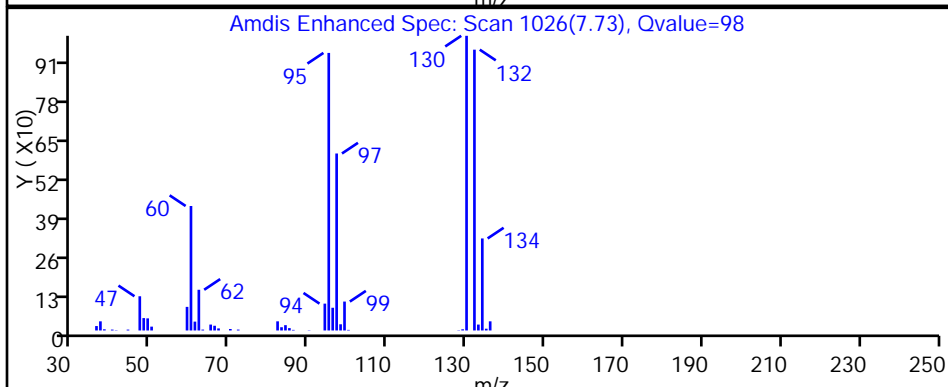
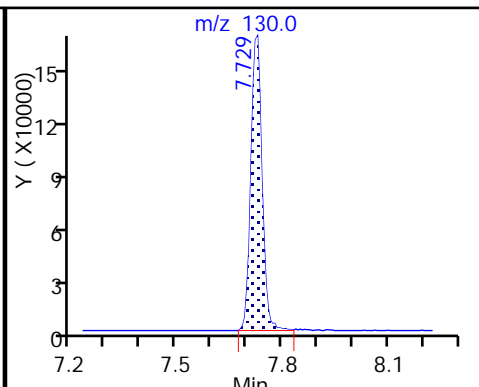
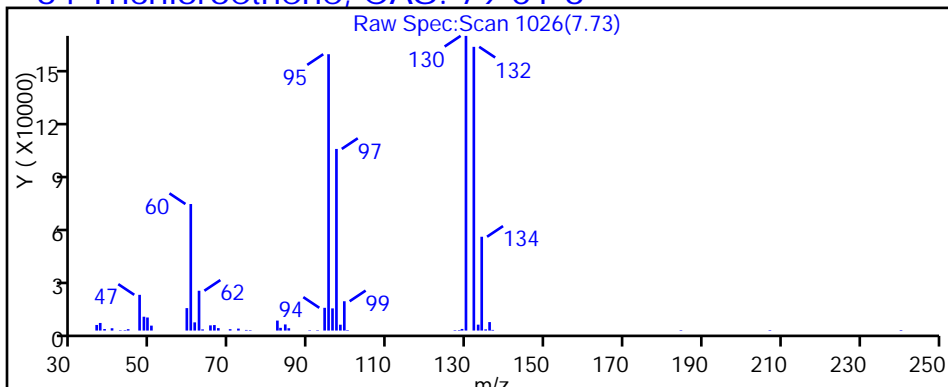
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D06.D

Injection Date: 26-Oct-2017 00:27:30

Instrument ID: CHHP5

Lims ID: 180-71467-B-4

Lab Sample ID: 180-71467-4

Client ID: HD-MW-102S-0/1-0

Operator ID: 034635

ALS Bottle#: 6

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

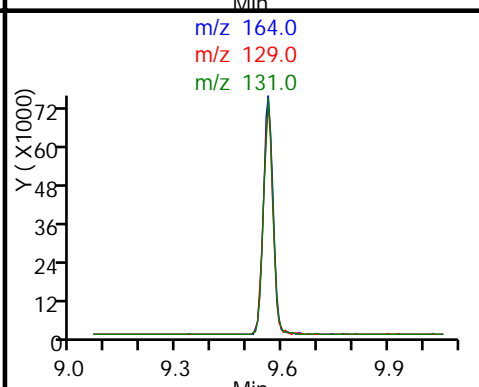
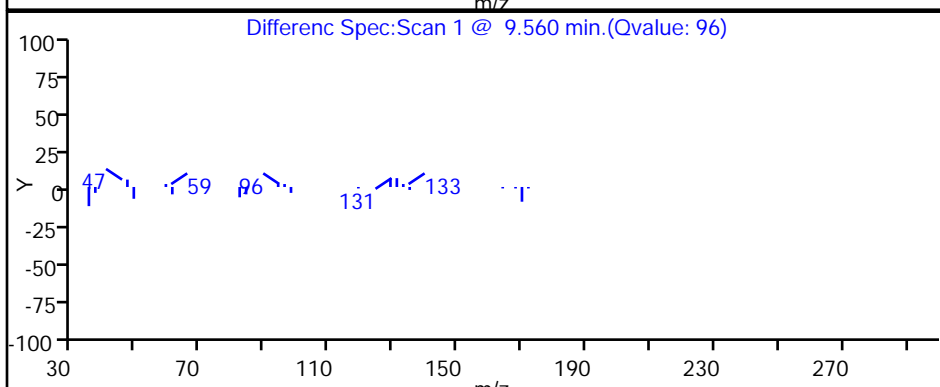
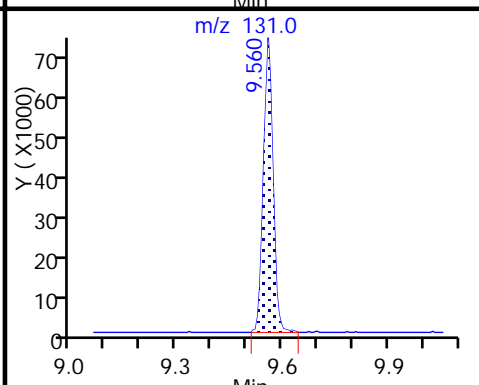
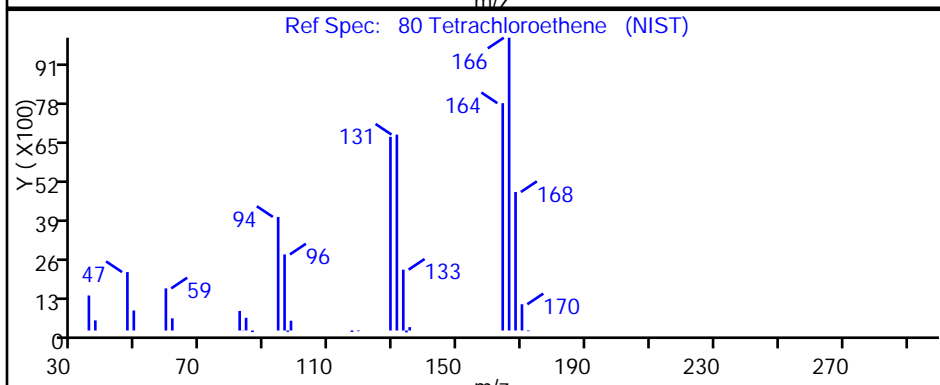
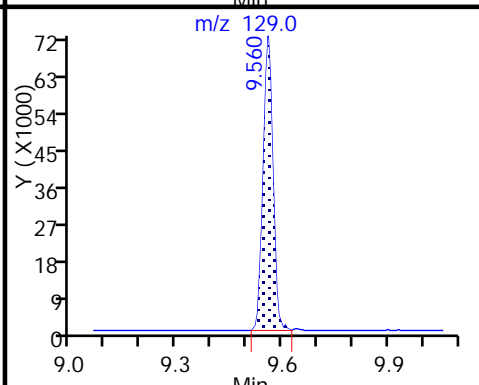
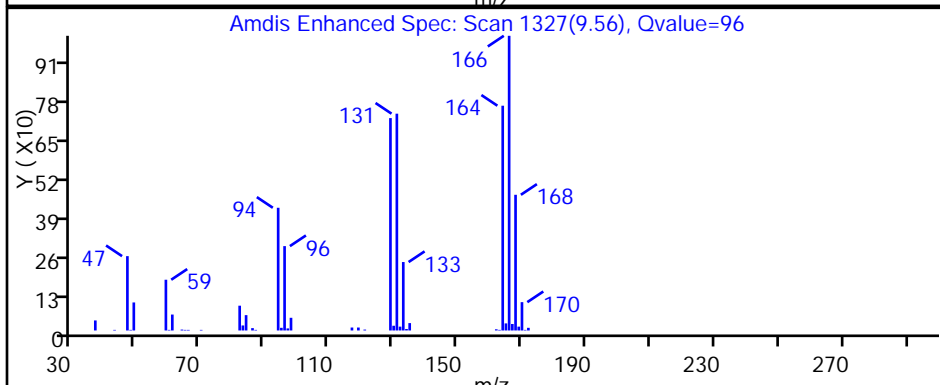
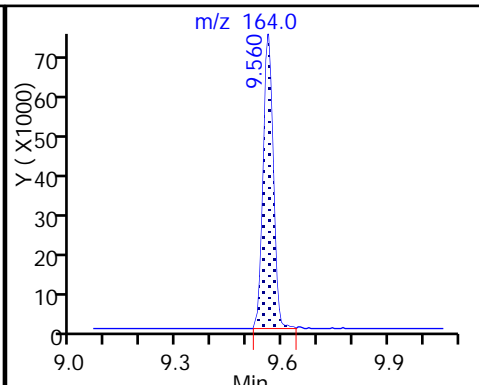
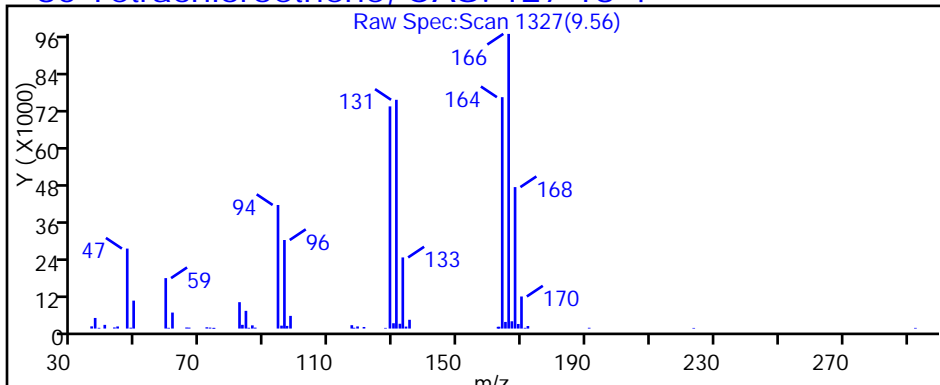
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-RW-2-0/1-0 Lab Sample ID: 180-71467-5  
 Matrix: Water Lab File ID: 51024D25.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 13:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 09:15  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U ^c	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	3.4		1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-RW-2-0/1-0 Lab Sample ID: 180-71467-5  
 Matrix: Water Lab File ID: 51024D25.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 13:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 09:15  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		65-121
2037-26-5	Toluene-d8 (Surr)	88		73-120
460-00-4	4-Bromofluorobenzene (Surr)	87		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D25.D  
 Lims ID: 180-71467-C-5  
 Client ID: HD-RW-2-0/1-0  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 09:15:30 ALS Bottle#: 25 Worklist Smp#: 25  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-025  
 Misc. Info.: 180-71467-C-5  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 20:45:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.364	4.376	-0.012	0	165399	1000.0	
* 2 Fluorobenzene (IS)	96	7.344	7.331	0.013	99	447628	50.0	
* 3 Chlorobenzene-d5	119	10.427	10.427	0.000	86	116618	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.769	12.768	0.001	97	160305	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.620	6.614	0.006	93	113293	52.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.985	6.985	0.000	0	145778	55.5	
\$ 7 Toluene-d8 (Surr)	98	8.980	8.979	0.001	94	410119	44.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.613	11.613	0.000	86	146068	43.6	
12 Chloromethane	50		1.895				ND	
13 Vinyl chloride	62		2.010				ND	
15 Bromomethane	94		2.332				ND	
16 Chloroethane	64		2.436				ND	
22 1,1-Dichloroethene	96		3.409				ND	
24 Acetone	43		3.530				ND	
26 Carbon disulfide	76		3.701				ND	
31 Methylene Chloride	84		4.230				ND	
33 Acrylonitrile	53		4.607				ND	
34 trans-1,2-Dichloroethene	96		4.631				ND	
35 Methyl tert-butyl ether	73		4.656				ND	
37 1,1-Dichloroethane	63		5.264				ND	
45 cis-1,2-Dichloroethene	96		6.006				ND	
46 2-Butanone (MEK)	43		6.024				ND	
49 Chlorobromomethane	128		6.291				ND	
52 Chloroform	83	6.438	6.437	0.001	1	1793	0.4136	
53 1,1,1-Trichloroethane	97		6.589				ND	
56 Carbon tetrachloride	117		6.766				ND	
58 Benzene	78		6.997				ND	
59 1,2-Dichloroethane	62		7.070				ND	
64 Trichloroethene	130	7.721	7.721	0.000	98	47094	17.2	
67 1,2-Dichloropropane	63		7.994				ND	
70 1,4-Dioxane	88		8.079				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.274				ND	
74 cis-1,3-Dichloropropene	75		8.718				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.870				ND	
76 Toluene	91	9.059	9.046	0.013	37	1816	0.1562	M
77 trans-1,3-Dichloropropene	75		9.290				ND	
79 1,1,2-Trichloroethane	97		9.490				ND	
80 Tetrachloroethene	164		9.557				ND	
82 2-Hexanone	43		9.703				ND	
84 Chlorodibromomethane	129		9.855				ND	
85 Ethylene Dibromide	107		9.971				ND	
87 Chlorobenzene	112		10.457				ND	
89 1,1,1,2-Tetrachloroethane	131		10.548				ND	
90 Ethylbenzene	106		10.561				ND	
91 m-Xylene & p-Xylene	106		10.688				ND	
92 o-Xylene	106		11.071				ND	
93 Styrene	104		11.090				ND	
94 Bromoform	173		11.272				ND	
99 1,1,2,2-Tetrachloroethane	83		11.752				ND	
S 133 Xylenes, Total	106		1.000				ND	

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D25.D

Injection Date: 25-Oct-2017 09:15:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-C-5

Lab Sample ID: 180-71467-5

Worklist Smp#: 25

Client ID: HD-RW-2-0/1-0

Purge Vol: 5.000 mL

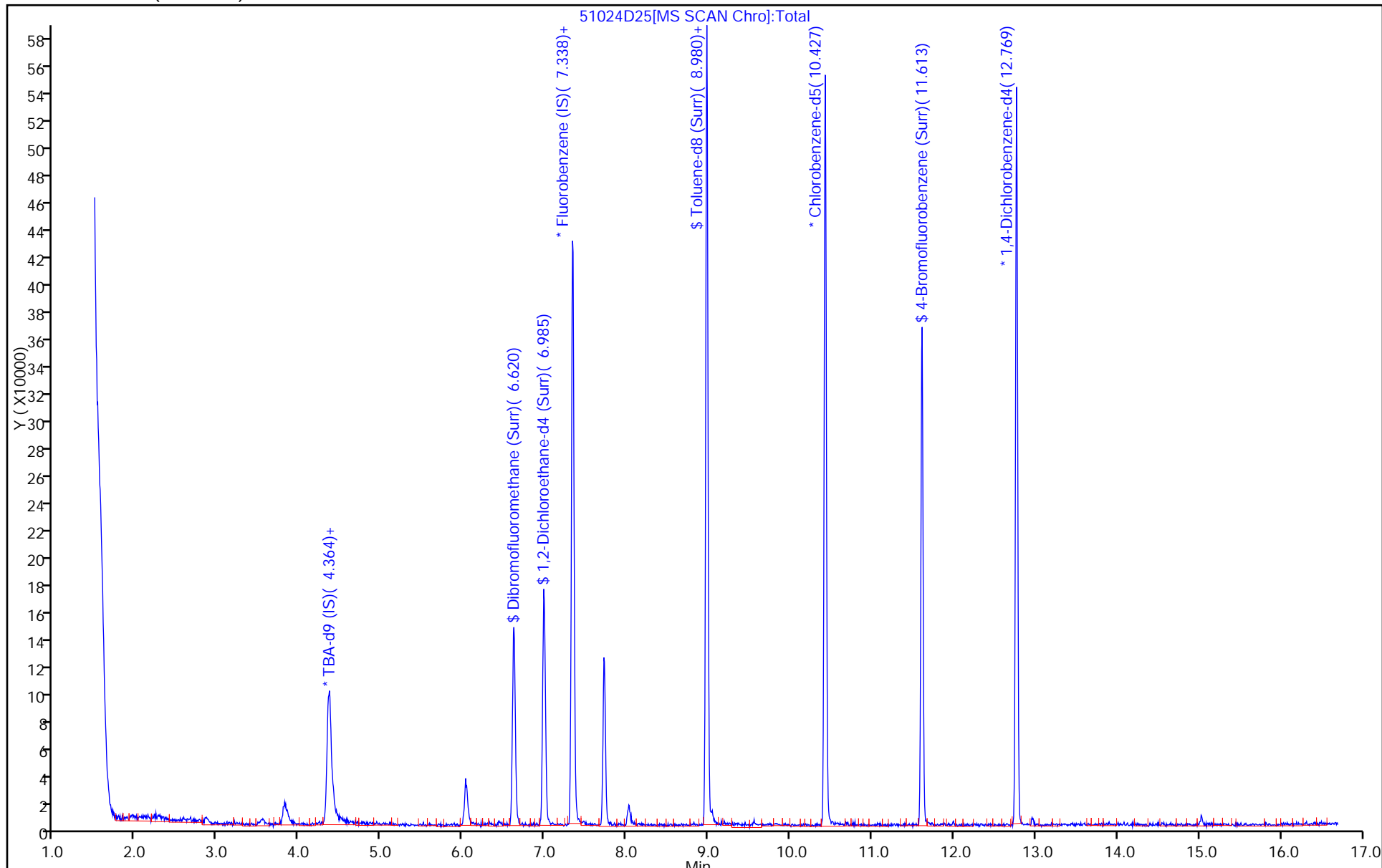
Dil. Factor: 1.0000

ALS Bottle#: 25

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D25.D  
 Lims ID: 180-71467-C-5  
 Client ID: HD-RW-2-0/1-0  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 09:15:30 ALS Bottle#: 25 Worklist Smp#: 25  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-025  
 Misc. Info.: 180-71467-C-5  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 20:45:06

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	52.6	105.20
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	55.5	110.99
\$ 7 Toluene-d8 (Surr)	50.0	44.2	88.37
\$ 8 4-Bromofluorobenzene (Surr)	50.0	43.6	87.15

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D25.D

Injection Date: 25-Oct-2017 09:15:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-5

Lab Sample ID: 180-71467-5

Client ID: HD-RW-2-0/1-0

Operator ID: 034635

ALS Bottle#: 25 Worklist Smp#: 25

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

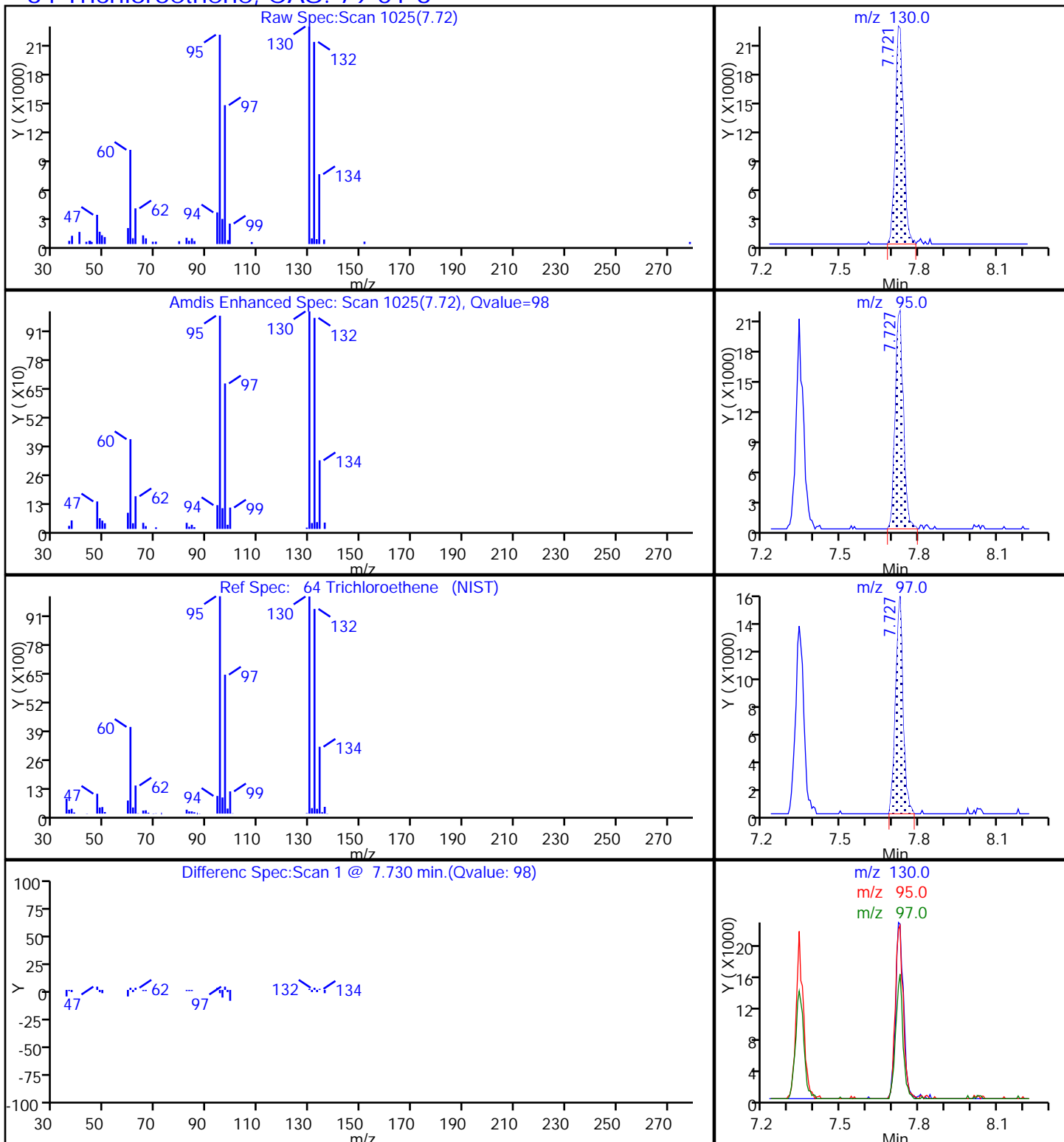
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

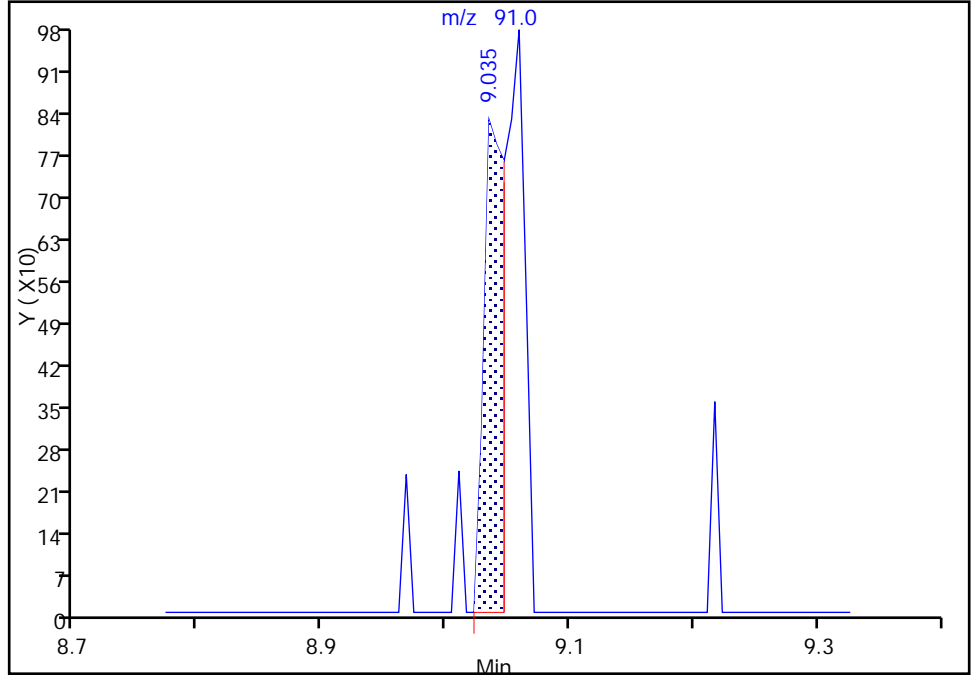
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D25.D  
Injection Date: 25-Oct-2017 09:15:30 Instrument ID: CHHP5  
Lims ID: 180-71467-C-5 Lab Sample ID: 180-71467-5  
Client ID: HD-RW-2-0/1-0  
Operator ID: 034635 ALS Bottle#: 25 Worklist Smp#: 25  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

76 Toluene, CAS: 108-88-3

Signal: 1

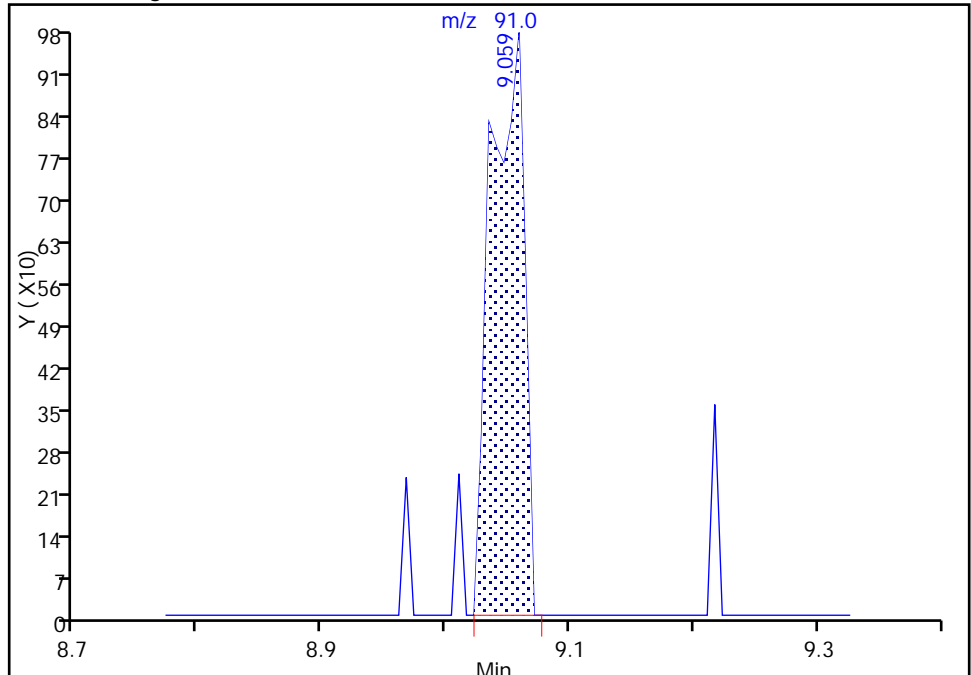
RT: 9.03  
Area: 974  
Amount: 0.083763  
Amount Units: ng

Processing Integration Results



RT: 9.06  
Area: 1816  
Amount: 0.156174  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 25-Oct-2017 20:44:53  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-57-0/1-0 Lab Sample ID: 180-71467-6  
 Matrix: Water Lab File ID: 51024D26.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:15  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 09:39  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U ^c	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	6.6		1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	6.8		1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	0.64	J	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	17		1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.3		1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-57-0/1-0 Lab Sample ID: 180-71467-6  
 Matrix: Water Lab File ID: 51024D26.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:15  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 09:39  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		65-121
2037-26-5	Toluene-d8 (Surr)	90		73-120
460-00-4	4-Bromofluorobenzene (Surr)	86		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D  
 Lims ID: 180-71467-A-6  
 Client ID: HD-MW-57-0/1-0  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 09:39:30 ALS Bottle#: 26 Worklist Smp#: 26  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-026  
 Misc. Info.: 180-71467-A-6  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 20:45:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.360	4.376	-0.016	0	161646	1000.0	
* 2 Fluorobenzene (IS)	96	7.340	7.331	0.009	99	440060	50.0	
* 3 Chlorobenzene-d5	119	10.435	10.427	0.008	86	112653	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.771	12.768	0.003	97	158560	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.622	6.614	0.008	93	110772	52.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.987	6.985	0.002	0	147296	57.0	
\$ 7 Toluene-d8 (Surr)	98	8.982	8.979	0.003	94	404348	45.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.609	11.613	-0.004	93	139130	43.0	
12 Chloromethane	50		1.895				ND	
13 Vinyl chloride	62		2.010				ND	
15 Bromomethane	94		2.332				ND	
16 Chloroethane	64		2.436				ND	
22 1,1-Dichloroethene	96	3.442	3.409	0.033	97	71119	33.0	
24 Acetone	43	3.551	3.530	0.021	81	8875	7.71	
26 Carbon disulfide	76		3.701				ND	
31 Methylene Chloride	84		4.230				ND	
33 Acrylonitrile	53		4.607				ND	
34 trans-1,2-Dichloroethene	96		4.631				ND	
35 Methyl tert-butyl ether	73		4.656				ND	
37 1,1-Dichloroethane	63	5.272	5.264	0.008	94	9447	2.21	
45 cis-1,2-Dichloroethene	96	6.020	6.006	0.014	80	95359	34.0	
46 2-Butanone (MEK)	43		6.024				ND	
49 Chlorobromomethane	128		6.291				ND	
52 Chloroform	83	6.440	6.437	0.003	94	13665	3.21	
53 1,1,1-Trichloroethane	97		6.589				ND	
56 Carbon tetrachloride	117		6.766				ND	
58 Benzene	78		6.997				ND	
59 1,2-Dichloroethane	62		7.070				ND	
64 Trichloroethene	130	7.729	7.721	0.008	97	232762	86.4	
67 1,2-Dichloropropane	63		7.994				ND	
70 1,4-Dioxane	88		8.079				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.274				ND	
74 cis-1,3-Dichloropropene	75		8.718				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.870				ND	
76 Toluene	91		9.046				ND	
77 trans-1,3-Dichloropropene	75		9.290				ND	
79 1,1,2-Trichloroethane	97		9.490				ND	
80 Tetrachloroethene	164	9.560	9.557	0.003	95	14371	6.71	
82 2-Hexanone	43		9.703				ND	
84 Chlorodibromomethane	129		9.855				ND	
85 Ethylene Dibromide	107		9.971				ND	
87 Chlorobenzene	112		10.457				ND	
89 1,1,1,2-Tetrachloroethane	131		10.548				ND	
90 Ethylbenzene	106		10.561				ND	
91 m-Xylene & p-Xylene	106		10.688				ND	
92 o-Xylene	106		11.071				ND	
93 Styrene	104		11.090				ND	
94 Bromoform	173		11.272				ND	
99 1,1,2,2-Tetrachloroethane	83		11.752				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D

Injection Date: 25-Oct-2017 09:39:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-A-6

Lab Sample ID: 180-71467-6

Worklist Smp#: 26

Client ID: HD-MW-57-0/1-0

Purge Vol: 5.000 mL

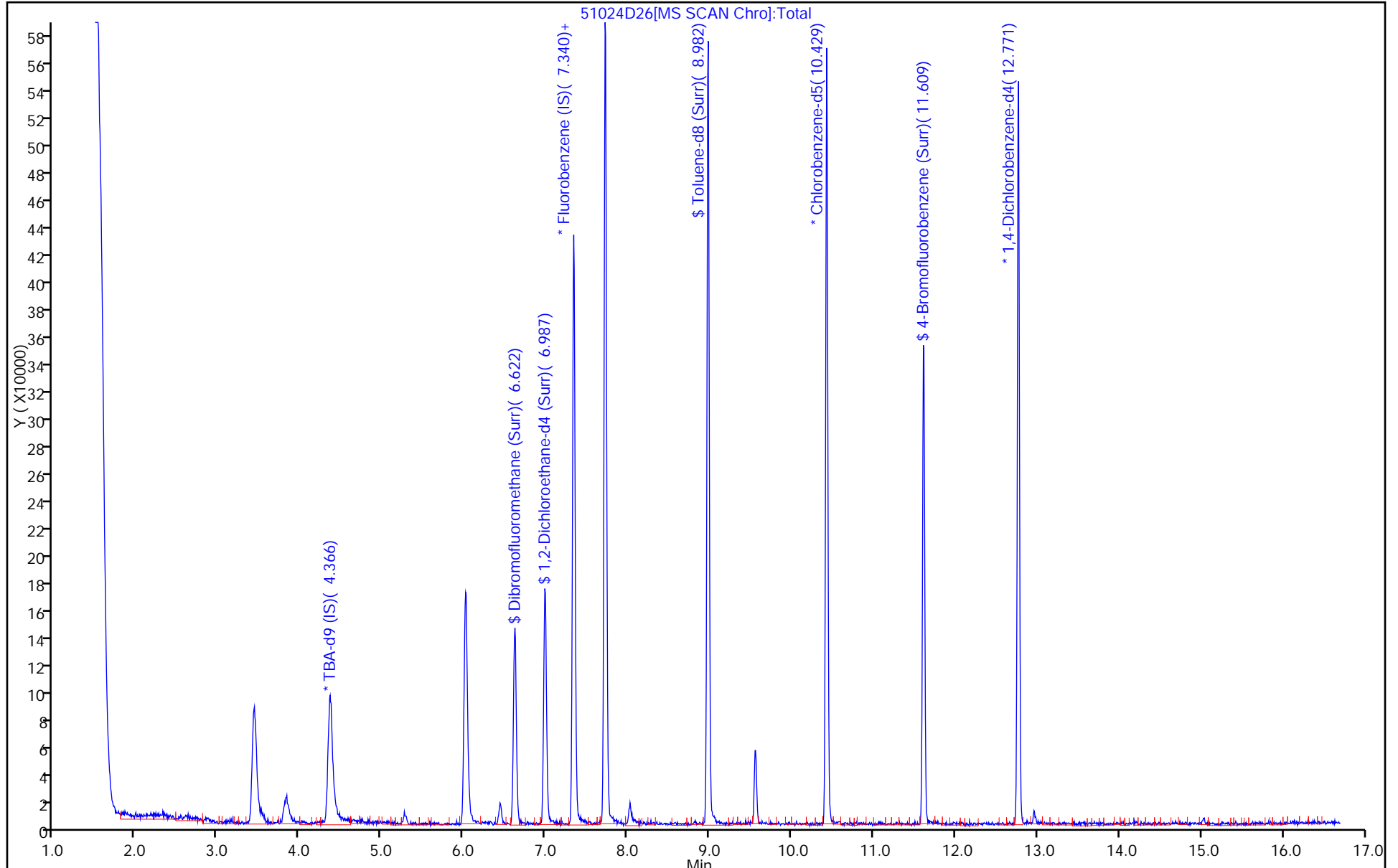
Dil. Factor: 1.0000

ALS Bottle#: 26

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D  
 Lims ID: 180-71467-A-6  
 Client ID: HD-MW-57-0/1-0  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 09:39:30 ALS Bottle#: 26 Worklist Smp#: 26  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-026  
 Misc. Info.: 180-71467-A-6  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 20:45:47

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	52.3	104.63
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	57.0	114.08
\$ 7 Toluene-d8 (Surr)	50.0	45.1	90.20
\$ 8 4-Bromofluorobenzene (Surr)	50.0	43.0	85.93

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D

Injection Date: 25-Oct-2017 09:39:30

Instrument ID: CHHP5

Lims ID: 180-71467-A-6

Lab Sample ID: 180-71467-6

Client ID: HD-MW-57-0/1-0

Operator ID: 034635

ALS Bottle#: 26

Worklist Smp#: 26

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

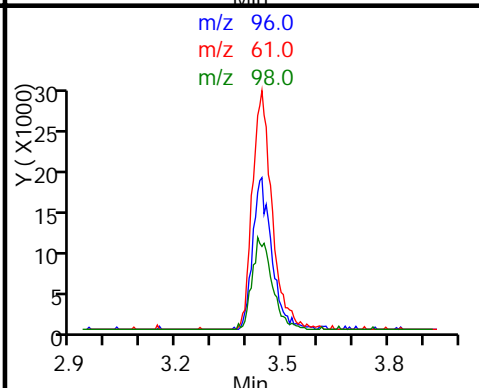
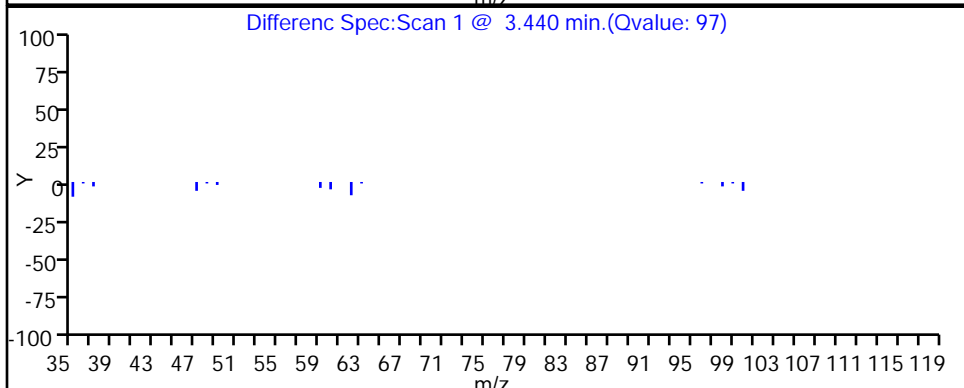
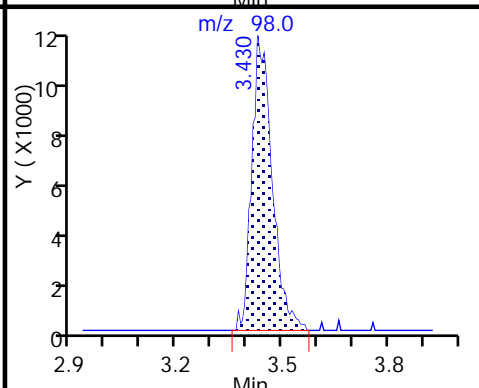
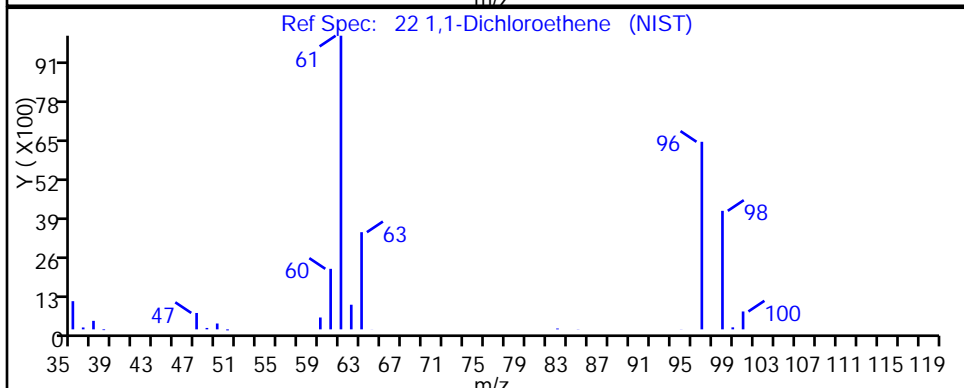
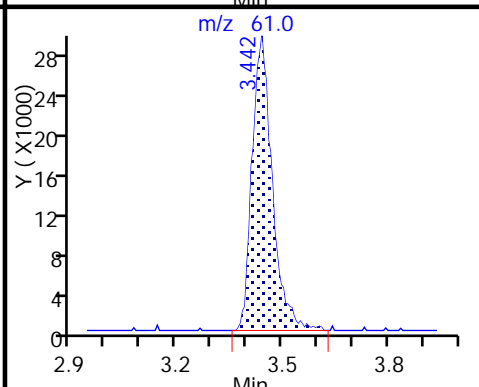
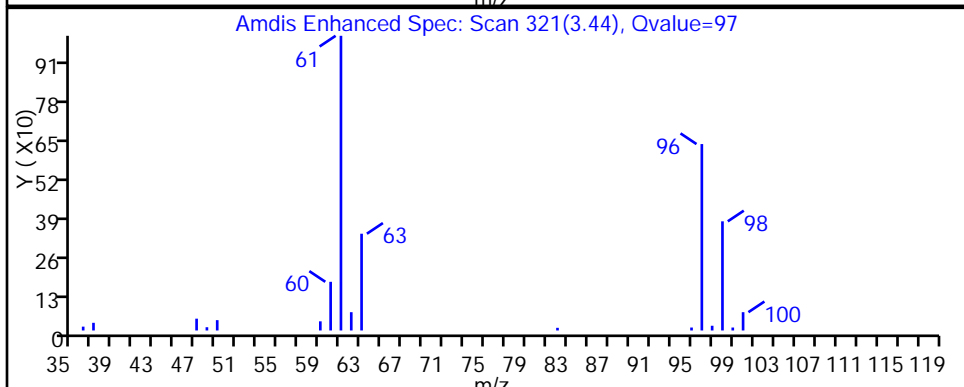
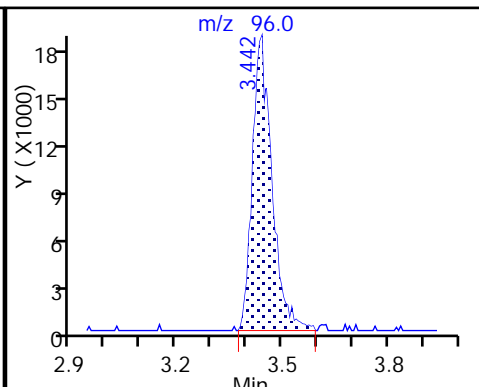
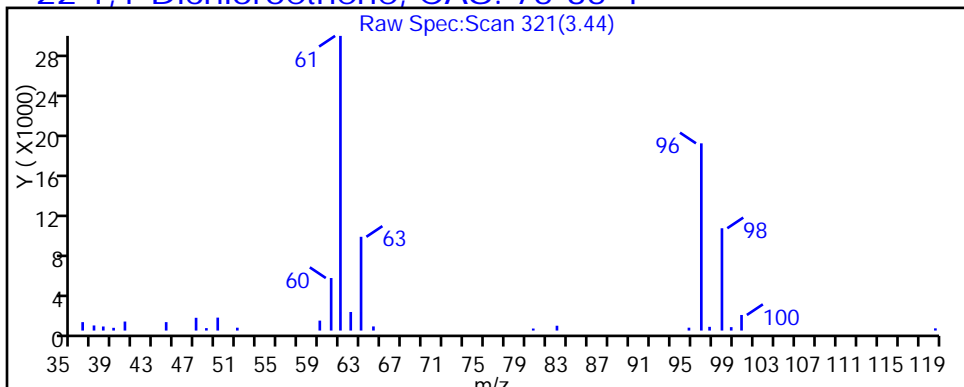
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D

Injection Date: 25-Oct-2017 09:39:30

Instrument ID: CHHP5

Lims ID: 180-71467-A-6

Lab Sample ID: 180-71467-6

Client ID: HD-MW-57-0/1-0

Operator ID: 034635

ALS Bottle#: 26

Worklist Smp#: 26

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

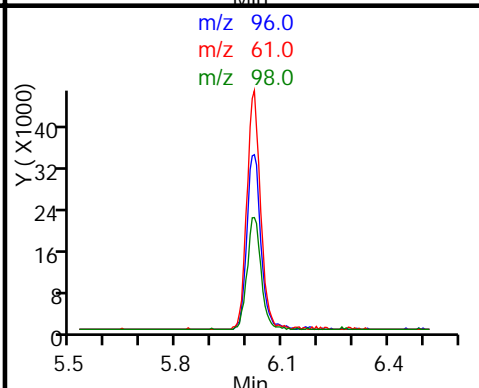
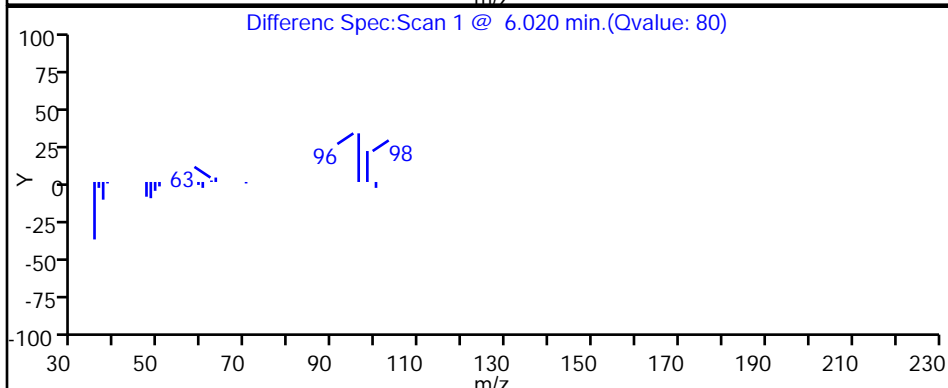
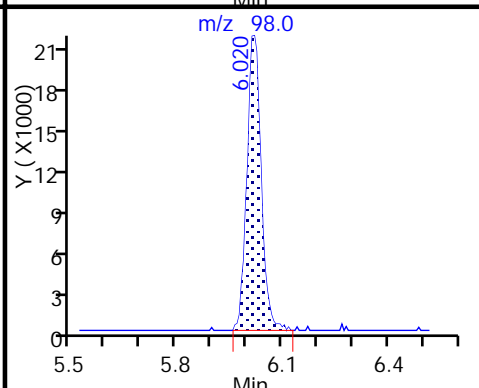
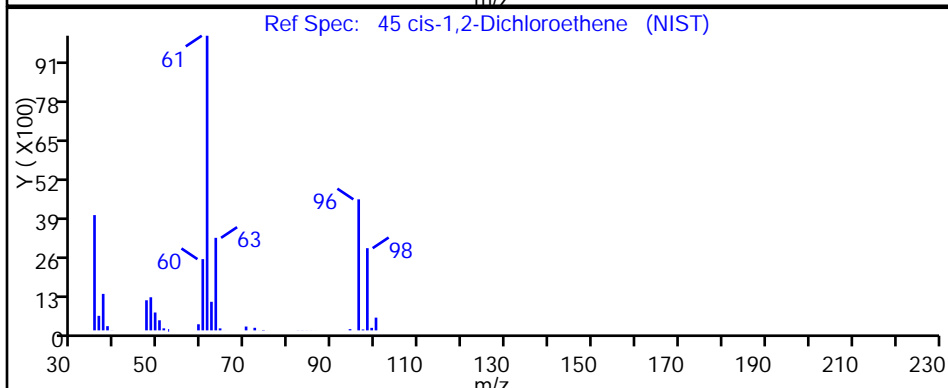
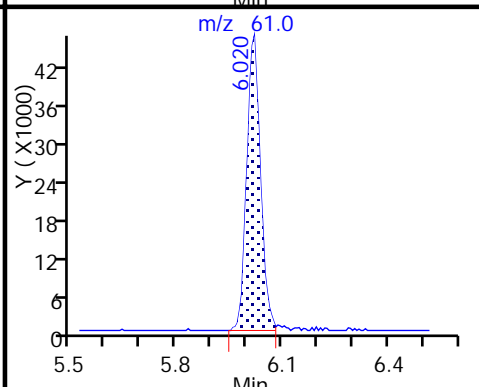
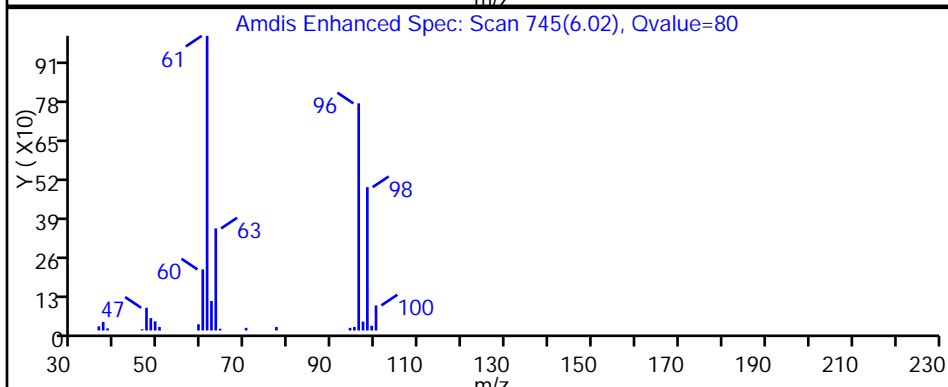
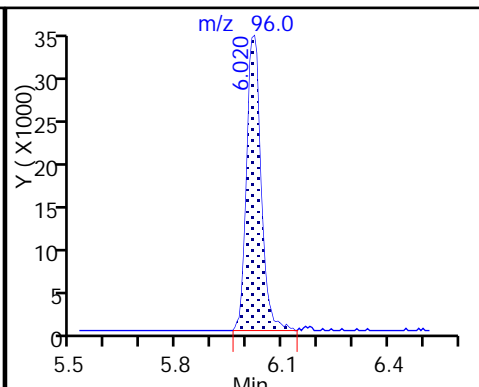
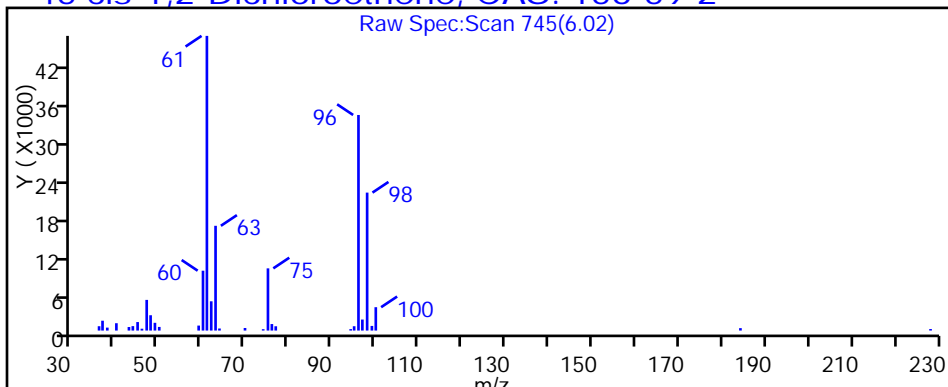
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D

Injection Date: 25-Oct-2017 09:39:30

Instrument ID: CHHP5

Lims ID: 180-71467-A-6

Lab Sample ID: 180-71467-6

Client ID: HD-MW-57-0/1-0

Operator ID: 034635

ALS Bottle#: 26

Worklist Smp#: 26

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

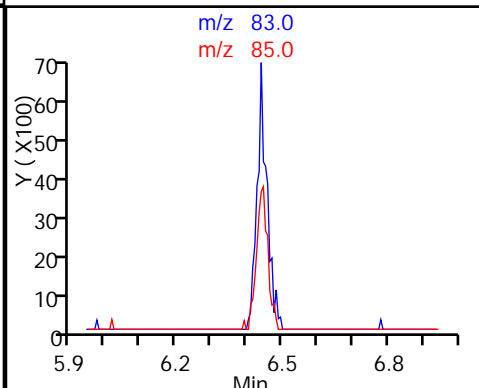
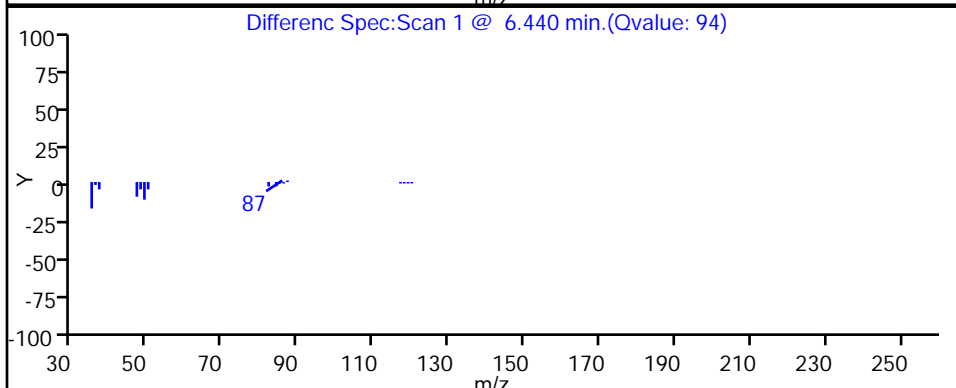
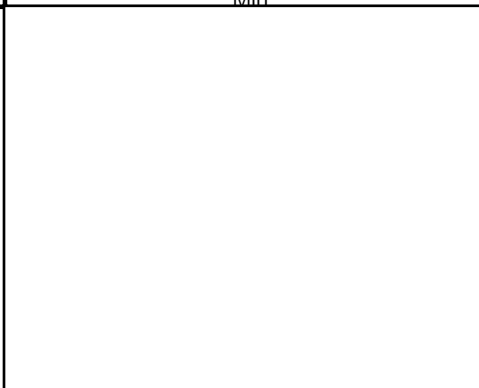
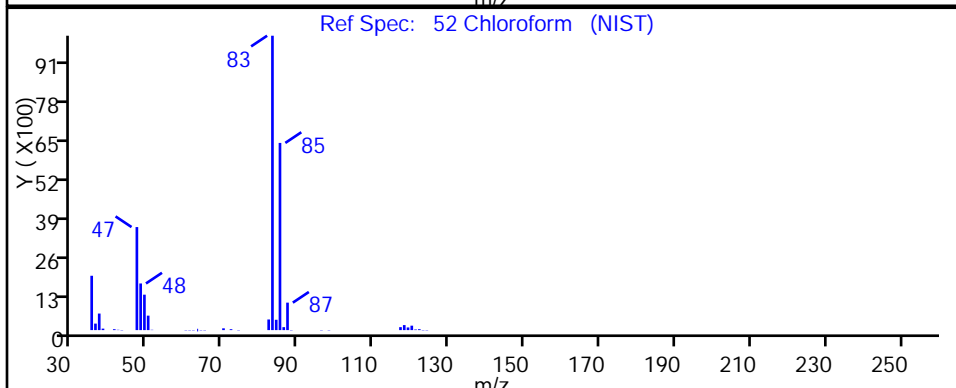
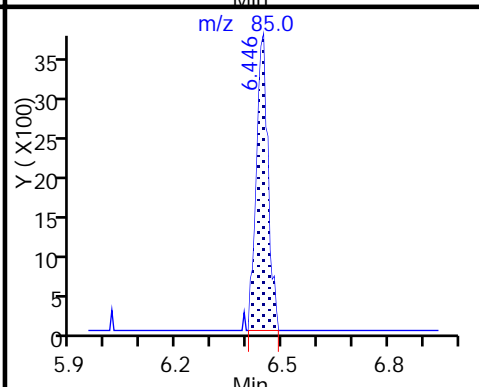
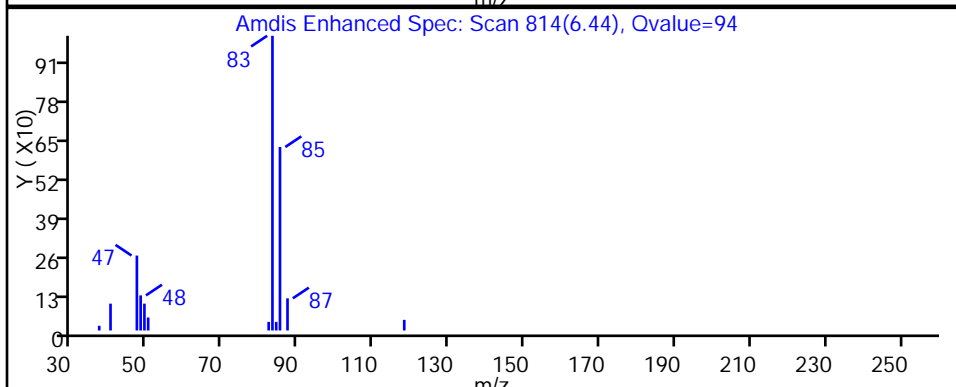
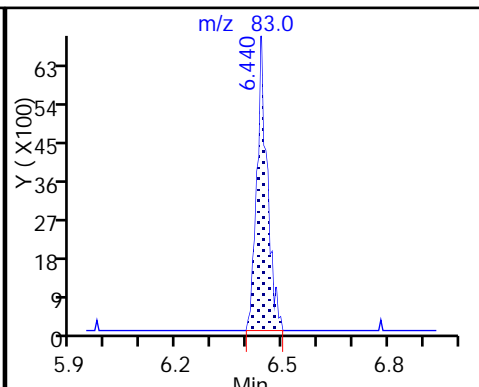
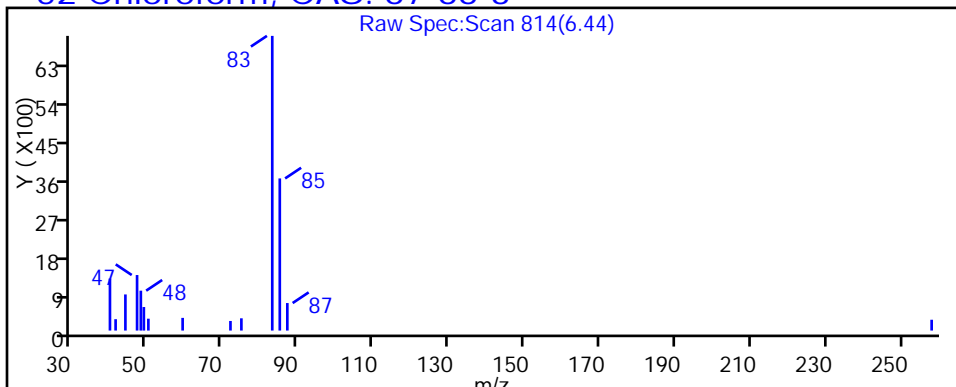
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

52 Chloroform, CAS: 67-66-3



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D

Injection Date: 25-Oct-2017 09:39:30

Instrument ID: CHHP5

Lims ID: 180-71467-A-6

Lab Sample ID: 180-71467-6

Client ID: HD-MW-57-0/1-0

Operator ID: 034635

ALS Bottle#: 26

Worklist Smp#: 26

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

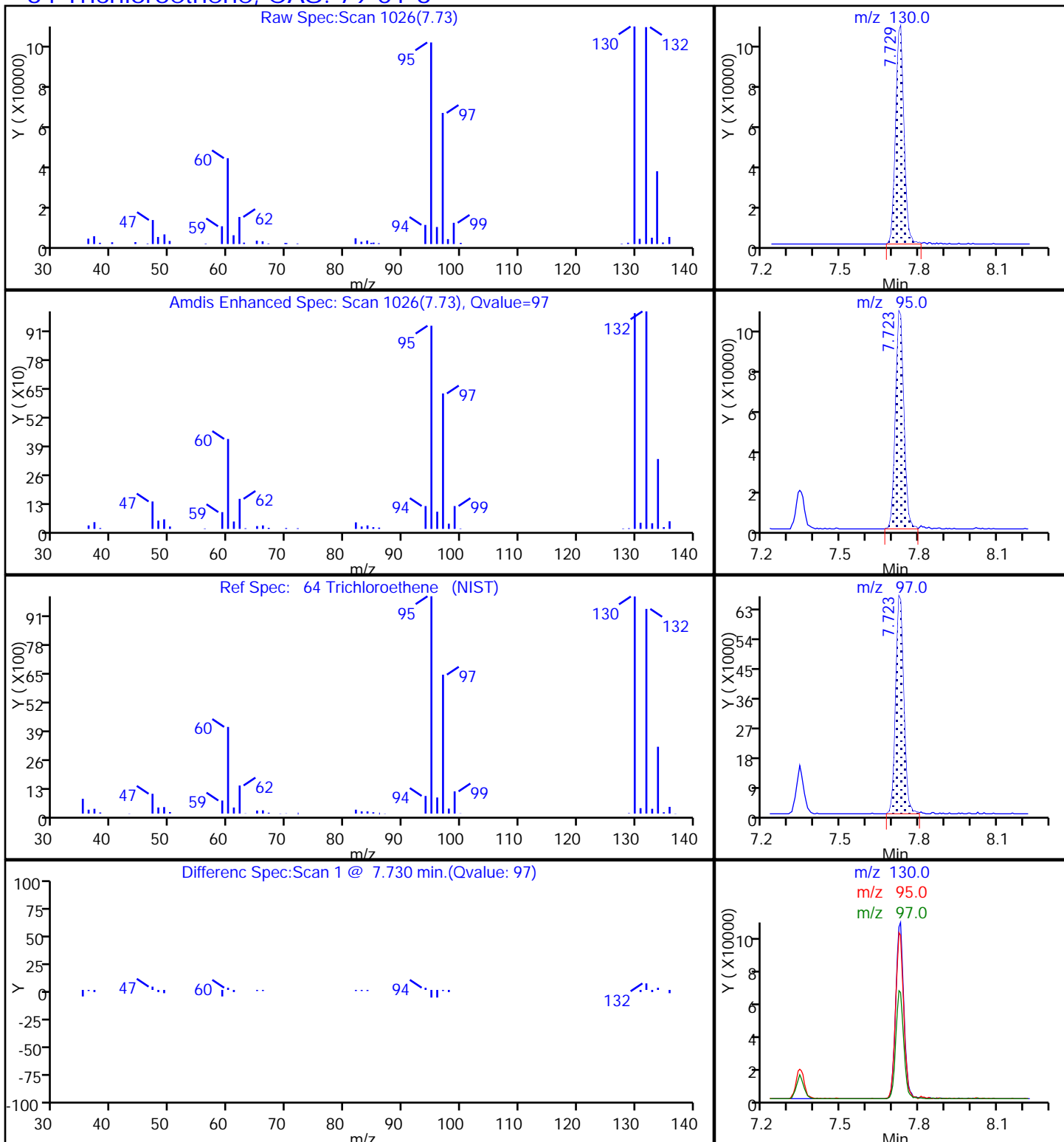
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D26.D

Injection Date: 25-Oct-2017 09:39:30

Instrument ID: CHHP5

Lims ID: 180-71467-A-6

Lab Sample ID: 180-71467-6

Client ID: HD-MW-57-0/1-0

Operator ID: 034635

ALS Bottle#: 26

Worklist Smp#: 26

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

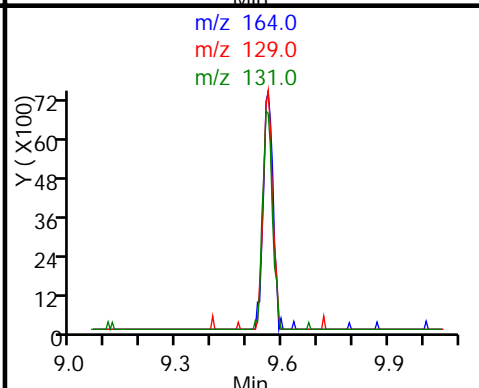
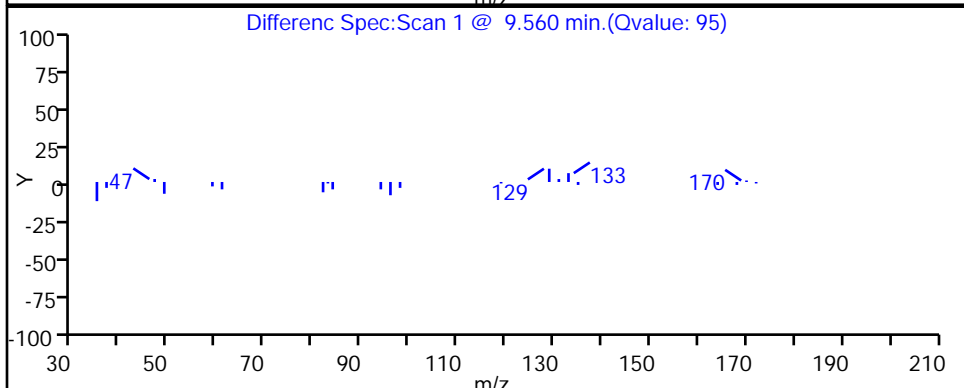
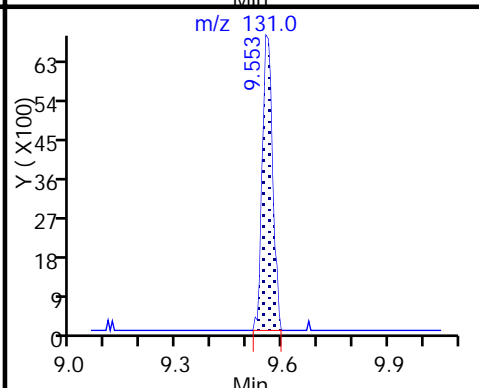
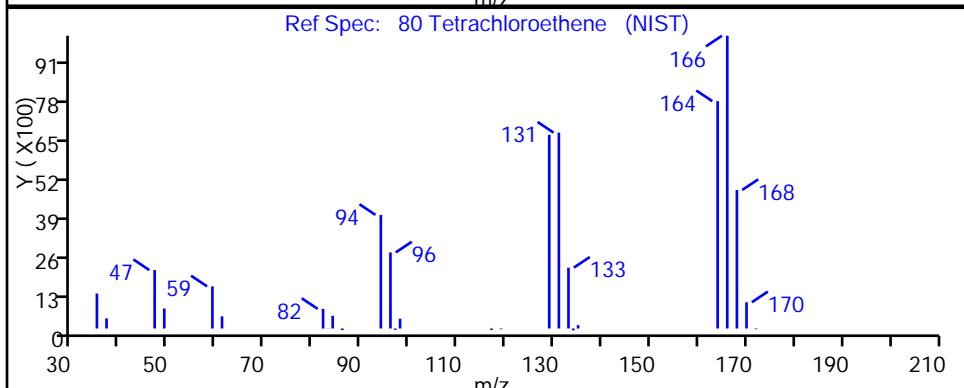
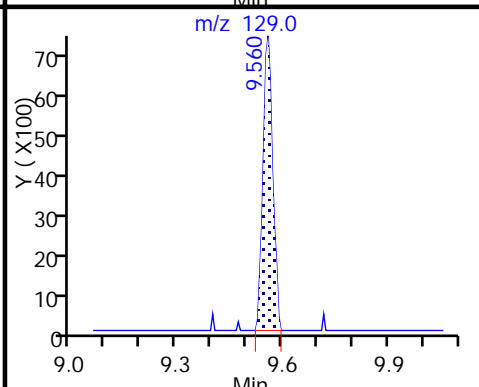
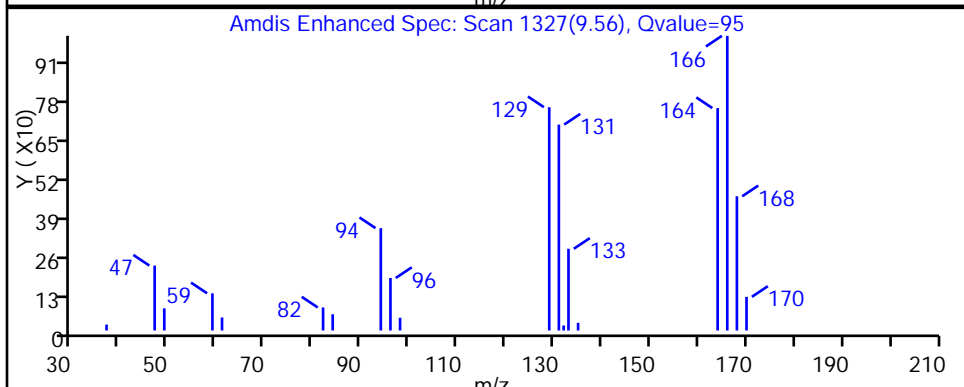
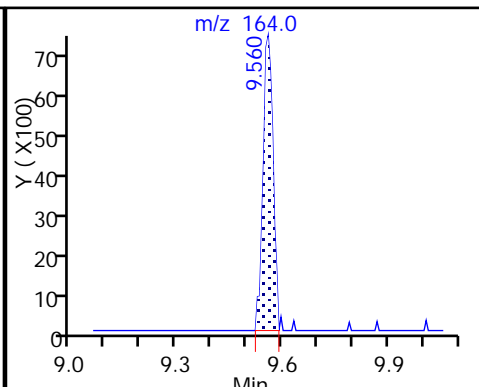
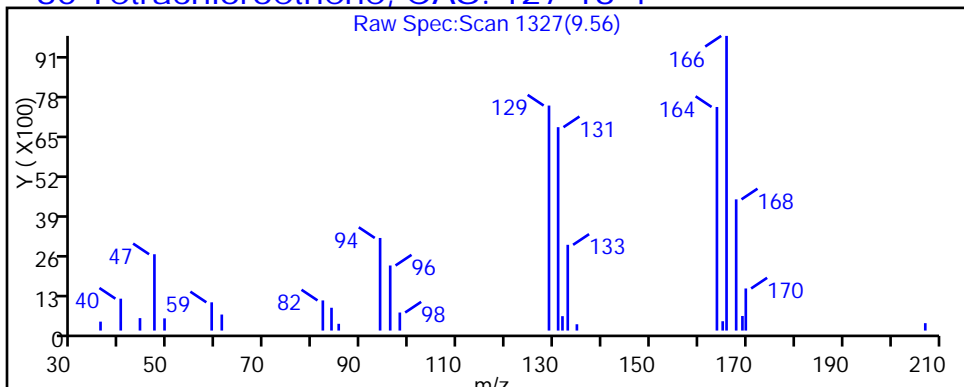
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-71467-7  
 Matrix: Water Lab File ID: 51024D27.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 12:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 10:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U ^c	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	1.0	U	1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-71467-7  
 Matrix: Water Lab File ID: 51024D27.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 12:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 10:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		65-121
2037-26-5	Toluene-d8 (Surr)	90		73-120
460-00-4	4-Bromofluorobenzene (Surr)	86		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D27.D  
 Lims ID: 180-71467-A-7  
 Client ID: HD-QC1-0/1-2  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 10:03:30 ALS Bottle#: 27 Worklist Smp#: 27  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-027  
 Misc. Info.: 180-71467-A-7  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 20:46:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.358	4.376	-0.018	0	159713	1000.0	
* 2 Fluorobenzene (IS)	96	7.338	7.331	0.007	98	437901	50.0	
* 3 Chlorobenzene-d5	119	10.433	10.427	0.006	86	111220	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.769	12.768	0.001	95	155179	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.620	6.614	0.006	93	116034	55.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.991	6.985	0.006	0	146453	57.0	
\$ 7 Toluene-d8 (Surr)	98	8.980	8.979	0.001	94	396894	44.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.613	11.613	0.000	87	138128	43.2	
12 Chloromethane	50		1.895				ND	
13 Vinyl chloride	62		2.010				ND	
15 Bromomethane	94		2.332				ND	
16 Chloroethane	64		2.436				ND	
22 1,1-Dichloroethene	96		3.409				ND	
24 Acetone	43	3.543	3.530	0.013	80	7652	6.68	
26 Carbon disulfide	76		3.701				ND	
31 Methylene Chloride	84		4.230				ND	
33 Acrylonitrile	53		4.607				ND	
34 trans-1,2-Dichloroethene	96		4.631				ND	
35 Methyl tert-butyl ether	73		4.656				ND	
37 1,1-Dichloroethane	63		5.264				ND	
45 cis-1,2-Dichloroethene	96		6.006				ND	
46 2-Butanone (MEK)	43		6.024				ND	
49 Chlorobromomethane	128		6.291				ND	
52 Chloroform	83	6.432	6.437	-0.005	29	850	0.2004	
53 1,1,1-Trichloroethane	97		6.589				ND	
56 Carbon tetrachloride	117		6.766				ND	
58 Benzene	78		6.997				ND	
59 1,2-Dichloroethane	62		7.070				ND	
64 Trichloroethene	130		7.721				ND	
67 1,2-Dichloropropane	63		7.994				ND	
70 1,4-Dioxane	88		8.079				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83	8.299	8.274	0.025	1	752	0.2637	
74 cis-1,3-Dichloropropene	75		8.718				ND	
75 4-Methyl-2-pentanone (MIBK)	43	8.980	8.870	0.110	33	1853	0.6496	
76 Toluene	91		9.046				ND	
77 trans-1,3-Dichloropropene	75		9.290				ND	
79 1,1,2-Trichloroethane	97		9.490				ND	
80 Tetrachloroethene	164		9.557				ND	
82 2-Hexanone	43	9.746	9.703	0.043	1	159	0.0727	
84 Chlorodibromomethane	129		9.855				ND	
85 Ethylene Dibromide	107		9.971				ND	
87 Chlorobenzene	112		10.457				ND	
89 1,1,1,2-Tetrachloroethane	131		10.548				ND	
90 Ethylbenzene	106		10.561				ND	
91 m-Xylene & p-Xylene	106		10.688				ND	
92 o-Xylene	106		11.071				ND	
93 Styrene	104		11.090				ND	
94 Bromoform	173		11.272				ND	
99 1,1,2,2-Tetrachloroethane	83		11.752				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D27.D

Injection Date: 25-Oct-2017 10:03:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-A-7

Lab Sample ID: 180-71467-7

Worklist Smp#: 27

Client ID: HD-QC1-0/1-2

Purge Vol: 5.000 mL

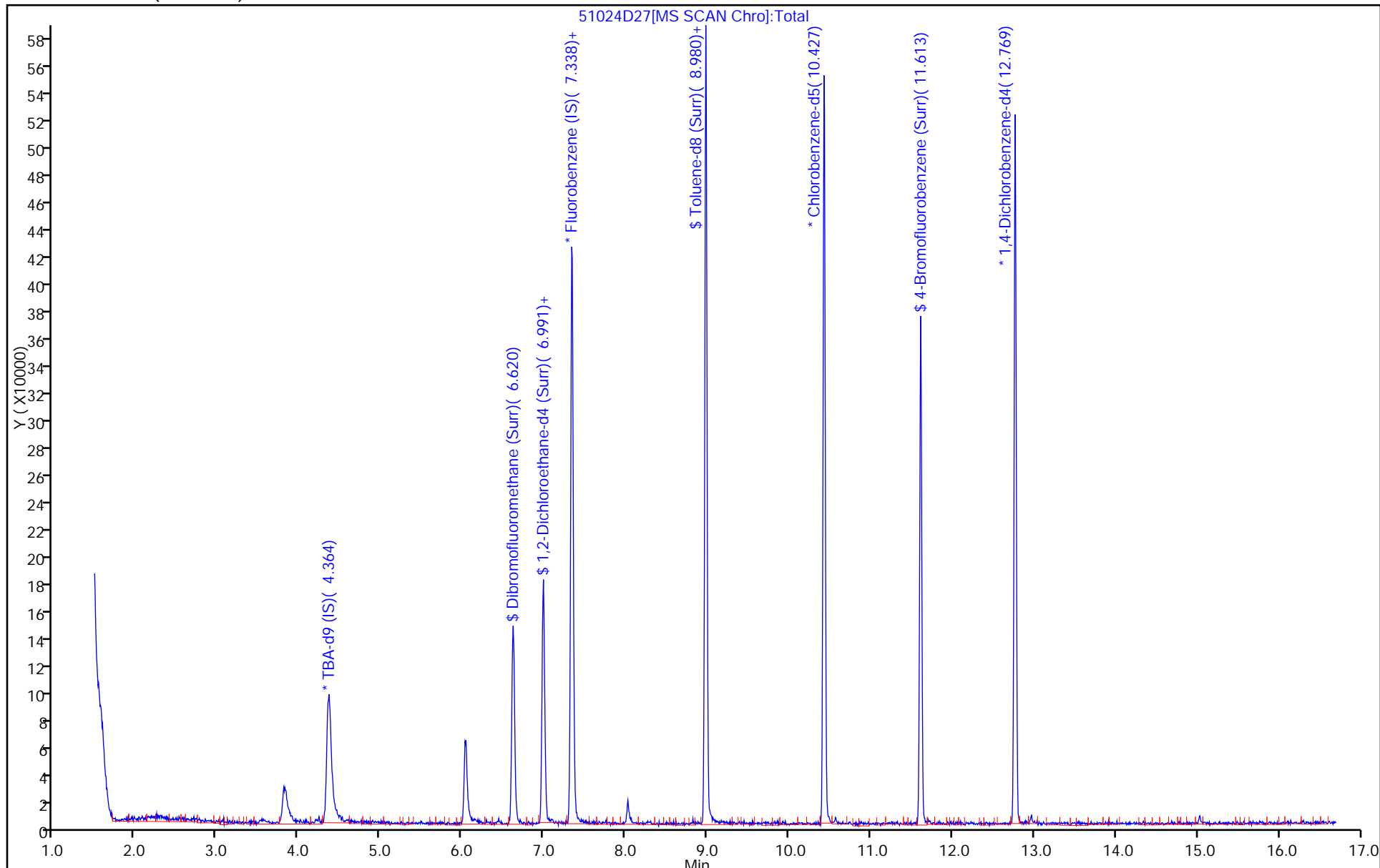
Dil. Factor: 1.0000

ALS Bottle#: 27

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D27.D  
 Lims ID: 180-71467-A-7  
 Client ID: HD-QC1-0/1-2  
 Sample Type: Client  
 Inject. Date: 25-Oct-2017 10:03:30 ALS Bottle#: 27 Worklist Smp#: 27  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-027  
 Misc. Info.: 180-71467-A-7  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf Date: 25-Oct-2017 20:46:29

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	55.1	110.14
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	57.0	113.98
\$ 7 Toluene-d8 (Surr)	50.0	44.8	89.68
\$ 8 4-Bromofluorobenzene (Surr)	50.0	43.2	86.41

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-71467-8  
 Matrix: Water Lab File ID: 51025D12.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 08:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 02:55  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U *	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U ^c	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	4.6	J	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	3.2		1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	2.8		1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	7.6		1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-71467-8  
 Matrix: Water Lab File ID: 51025D12.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 08:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 02:55  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		65-121
2037-26-5	Toluene-d8 (Surr)	91		73-120
460-00-4	4-Bromofluorobenzene (Surr)	88		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D12.D  
 Lims ID: 180-71467-C-8  
 Client ID: HD-QC1-0/1-1  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 02:55:30 ALS Bottle#: 12 Worklist Smp#: 12  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-012  
 Misc. Info.: 180-71467-C-8  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 03:18:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.366	4.384	-0.018	0	178061	1000.0	
* 2 Fluorobenzene (IS)	96	7.339	7.340	-0.001	98	437170	50.0	
* 3 Chlorobenzene-d5	119	10.429	10.429	0.000	87	110539	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.770	12.770	0.000	96	154265	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.622	6.610	0.012	93	110574	52.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.987	6.987	0.000	0	144129	56.2	
\$ 7 Toluene-d8 (Surr)	98	8.981	8.982	-0.001	94	401734	45.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.615	11.609	0.006	87	140551	44.2	
12 Chloromethane	50		1.891				ND	
13 Vinyl chloride	62		2.012				ND	
15 Bromomethane	94		2.335				ND	
16 Chloroethane	64		2.426				ND	
22 1,1-Dichloroethene	96		3.411				ND	
24 Acetone	43	3.545	3.539	0.006	99	26297	23.0	
26 Carbon disulfide	76		3.703				ND	
31 Methylene Chloride	84		4.226				ND	
33 Acrylonitrile	53		4.609				ND	
34 trans-1,2-Dichloroethene	96		4.640				ND	
35 Methyl tert-butyl ether	73	4.651	4.664	-0.013	24	3693	0.5648	
37 1,1-Dichloroethane	63		5.266				ND	
45 cis-1,2-Dichloroethene	96	6.014	6.008	0.006	80	45253	16.2	
46 2-Butanone (MEK)	43		6.026				ND	
49 Chlorobromomethane	128		6.288				ND	
52 Chloroform	83	6.439	6.434	0.005	94	8988	2.12	M
53 1,1,1-Trichloroethane	97		6.592				ND	
56 Carbon tetrachloride	117		6.762				ND	
58 Benzene	78		6.993				ND	
59 1,2-Dichloroethane	62		7.072				ND	
64 Trichloroethene	130	7.729	7.723	0.006	98	38012	14.2	
67 1,2-Dichloropropane	63		7.997				ND	
70 1,4-Dioxane	88		8.082				ND	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.276				ND	
74 cis-1,3-Dichloropropene	75		8.720				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.872				ND	
76 Toluene	91		9.049				ND	
77 trans-1,3-Dichloropropene	75		9.298				ND	
79 1,1,2-Trichloroethane	97		9.486				ND	
80 Tetrachloroethene	164	9.559	9.559	0.000	99	79389	37.8	
82 2-Hexanone	43		9.705				ND	
84 Chlorodibromomethane	129		9.857				ND	
85 Ethylene Dibromide	107		9.967				ND	
87 Chlorobenzene	112		10.459				ND	
89 1,1,1,2-Tetrachloroethane	131		10.551				ND	
90 Ethylbenzene	106		10.557				ND	
91 m-Xylene & p-Xylene	106		10.684				ND	
92 o-Xylene	106		11.068				ND	
93 Styrene	104		11.092				ND	
94 Bromoform	173		11.274				ND	
99 1,1,2,2-Tetrachloroethane	83		11.749				ND	
S 133 Xylenes, Total	106		1.000				ND	

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D12.D

Injection Date: 26-Oct-2017 02:55:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-C-8

Lab Sample ID: 180-71467-8

Worklist Smp#: 12

Client ID: HD-QC1-0/1-1

Purge Vol: 5.000 mL

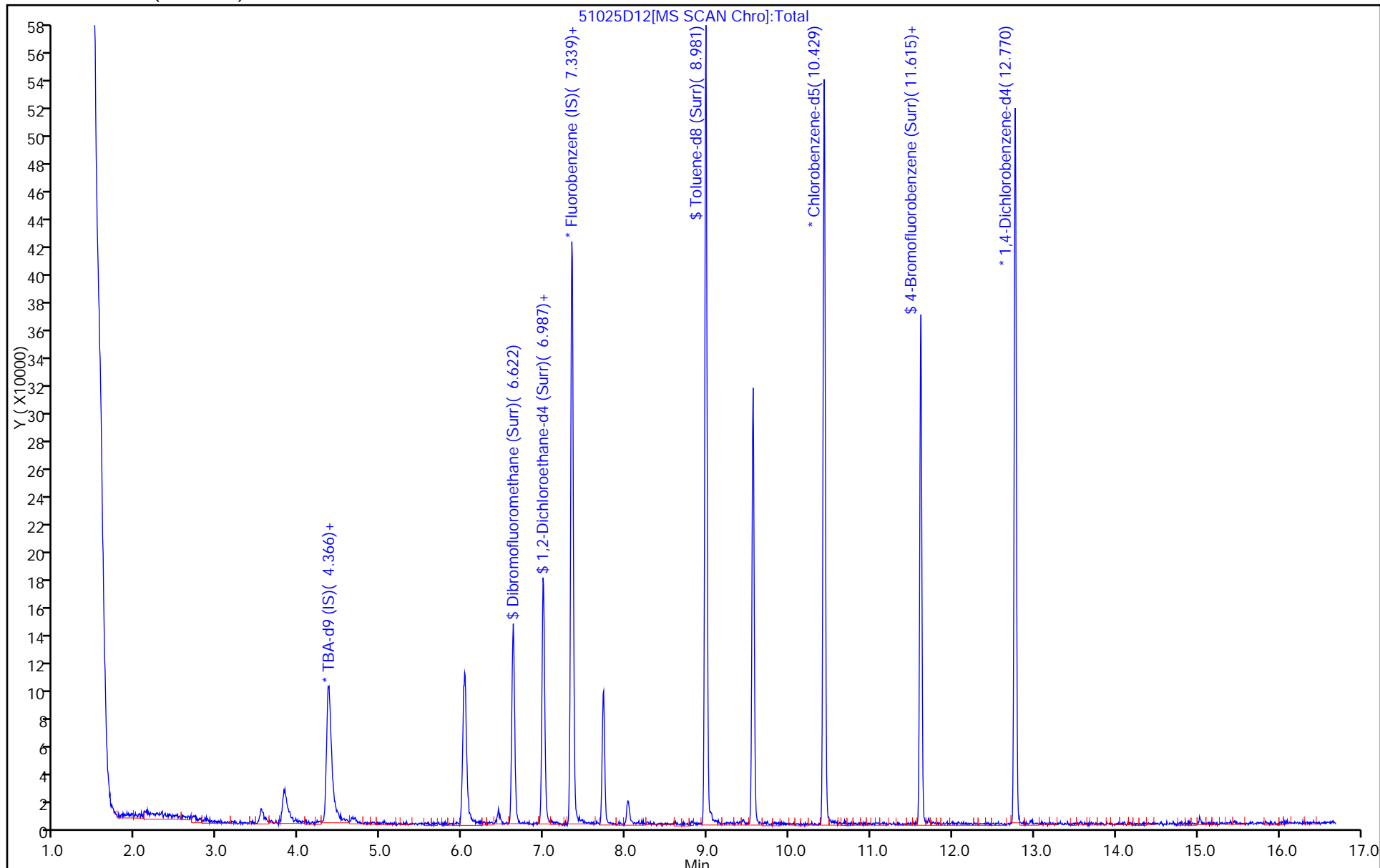
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D12.D  
 Lims ID: 180-71467-C-8  
 Client ID: HD-QC1-0/1-1  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 02:55:30 ALS Bottle#: 12 Worklist Smp#: 12  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-012  
 Misc. Info.: 180-71467-C-8  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 03:18:49

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	52.6	105.14
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	56.2	112.36
\$ 7 Toluene-d8 (Surr)	50.0	45.7	91.33
\$ 8 4-Bromofluorobenzene (Surr)	50.0	44.2	88.47

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D12.D

Injection Date: 26-Oct-2017 02:55:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-8

Lab Sample ID: 180-71467-8

Client ID: HD-QC1-0/1-1

Operator ID: 034635

ALS Bottle#: 12

Worklist Smp#: 12

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

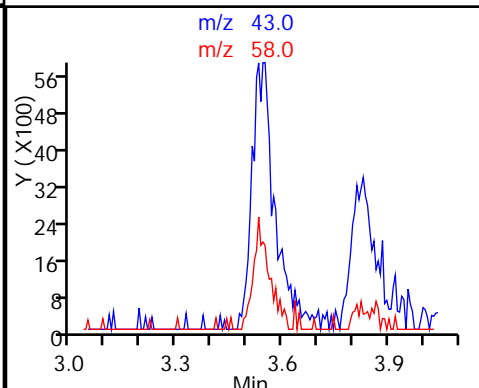
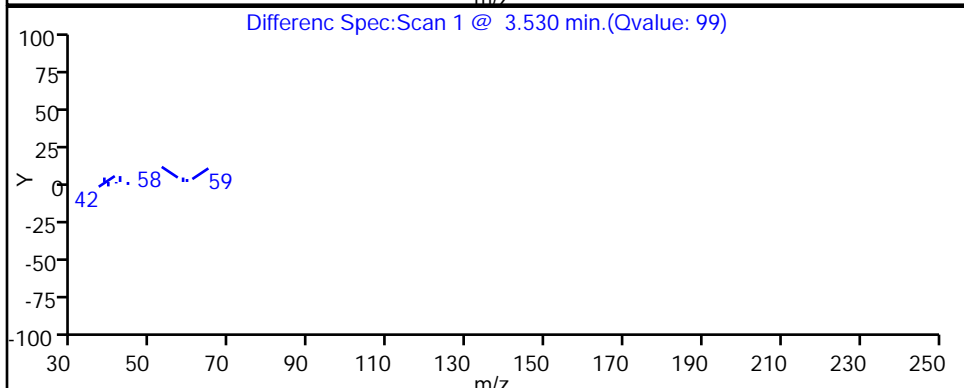
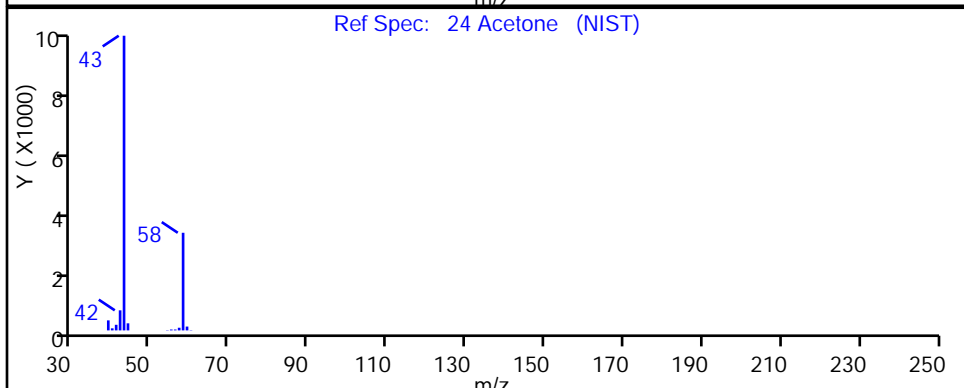
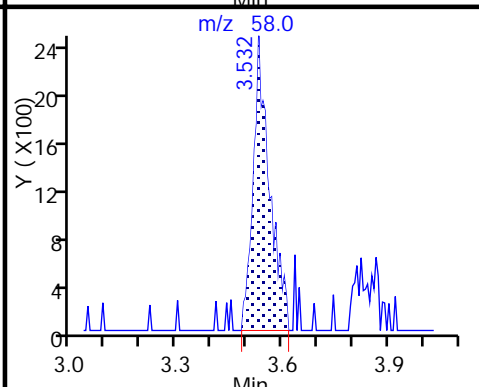
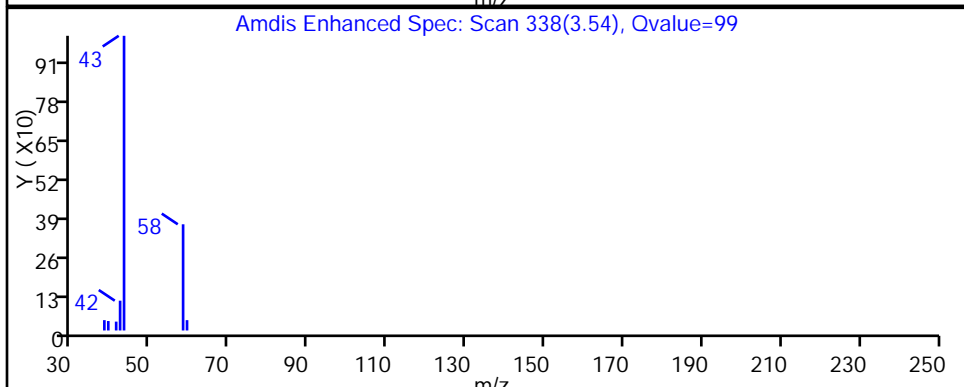
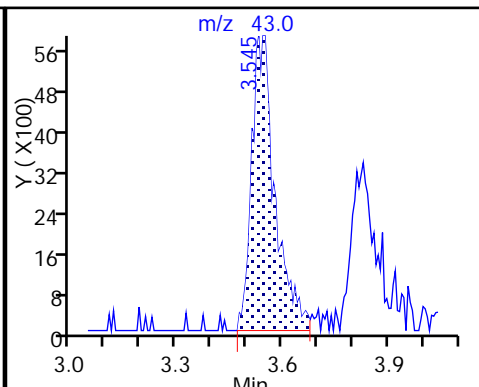
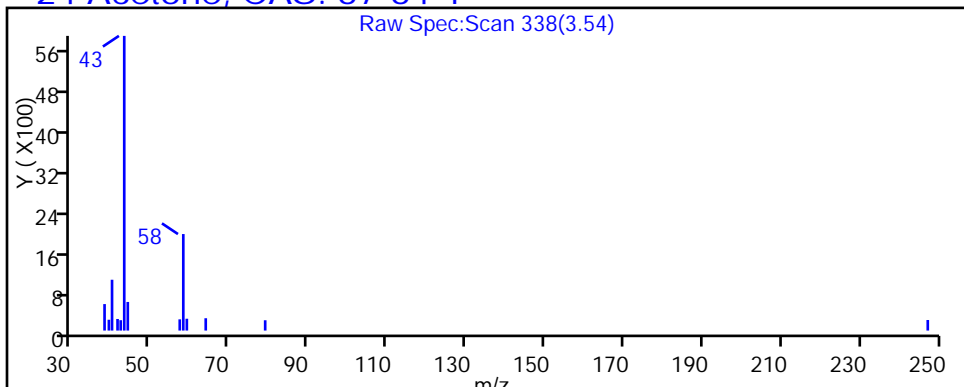
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

24 Acetone, CAS: 67-64-1



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D12.D

Injection Date: 26-Oct-2017 02:55:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-8

Lab Sample ID: 180-71467-8

Client ID: HD-QC1-0/1-1

Operator ID: 034635

ALS Bottle#: 12

Worklist Smp#: 12

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

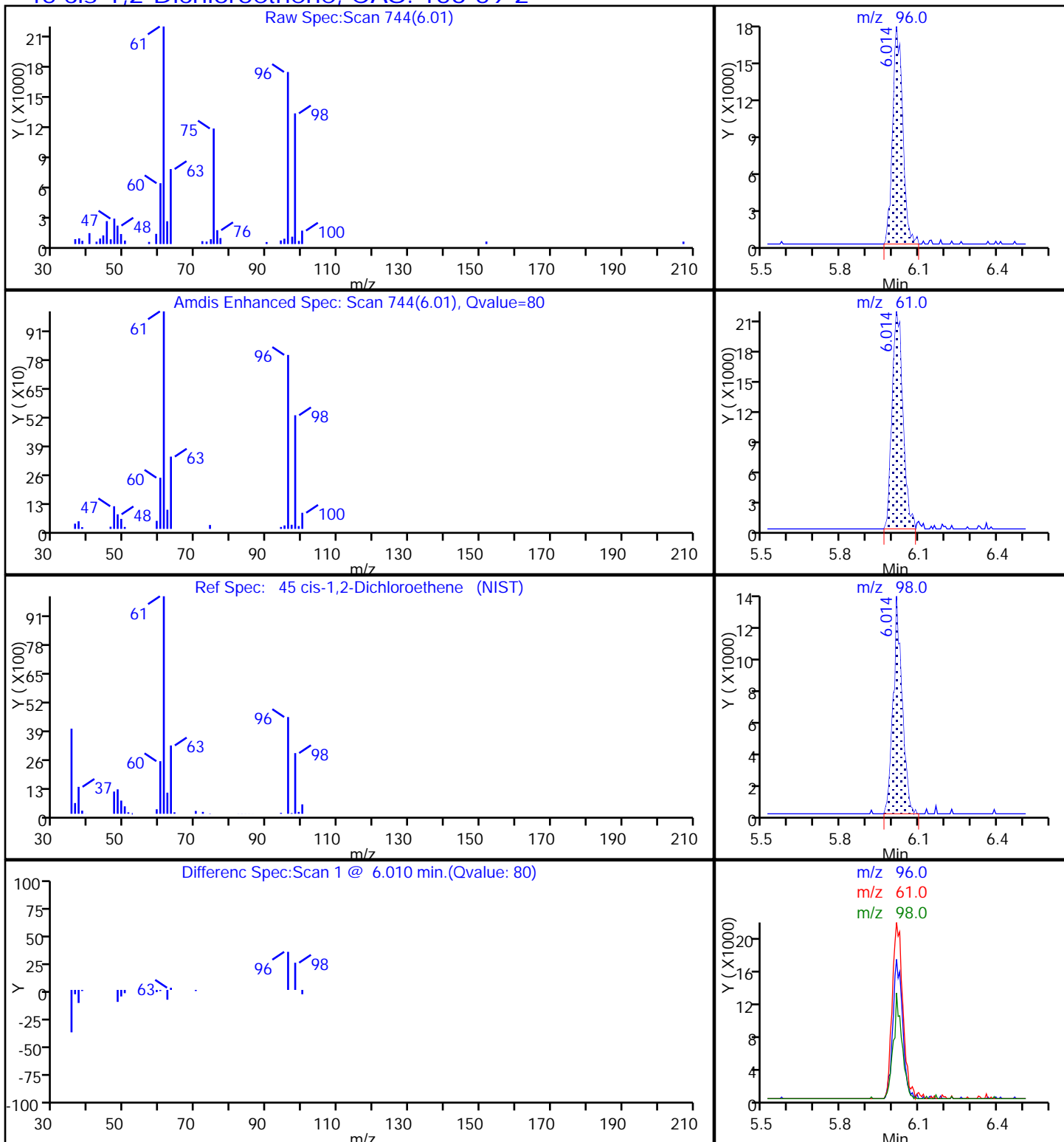
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D12.D

Injection Date: 26-Oct-2017 02:55:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-8

Lab Sample ID: 180-71467-8

Client ID: HD-QC1-0/1-1

Operator ID: 034635

ALS Bottle#: 12

Worklist Smp#: 12

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

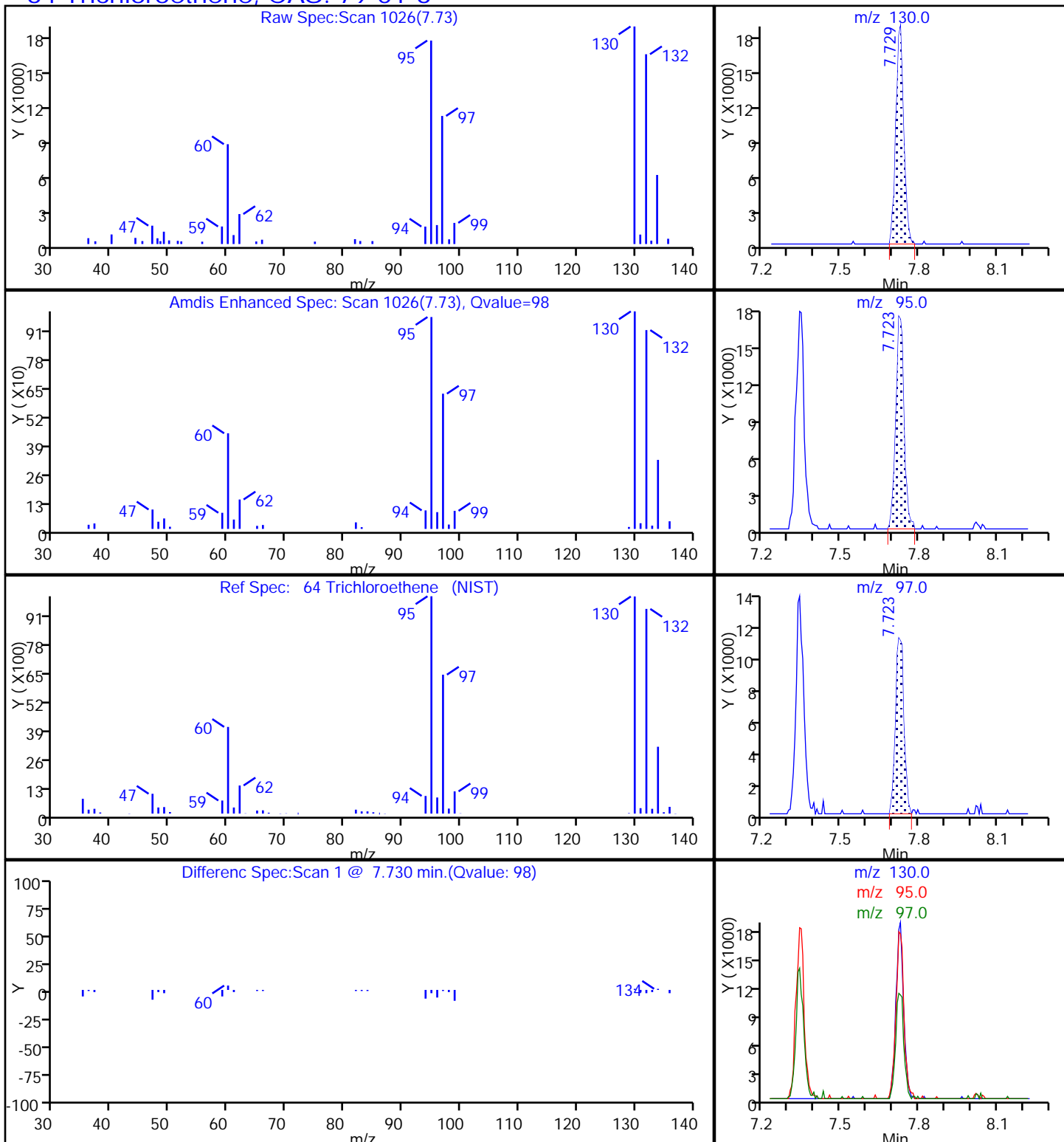
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D12.D

Injection Date: 26-Oct-2017 02:55:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-8

Lab Sample ID: 180-71467-8

Client ID: HD-QC1-0/1-1

Operator ID: 034635

ALS Bottle#: 12

Worklist Smp#: 12

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

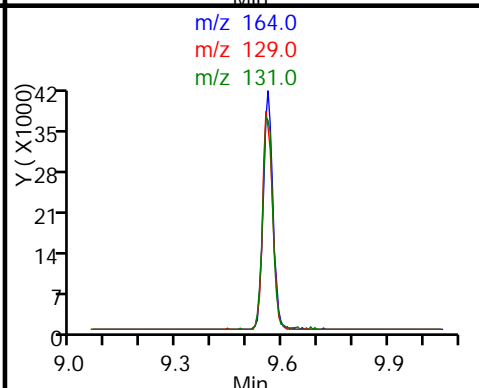
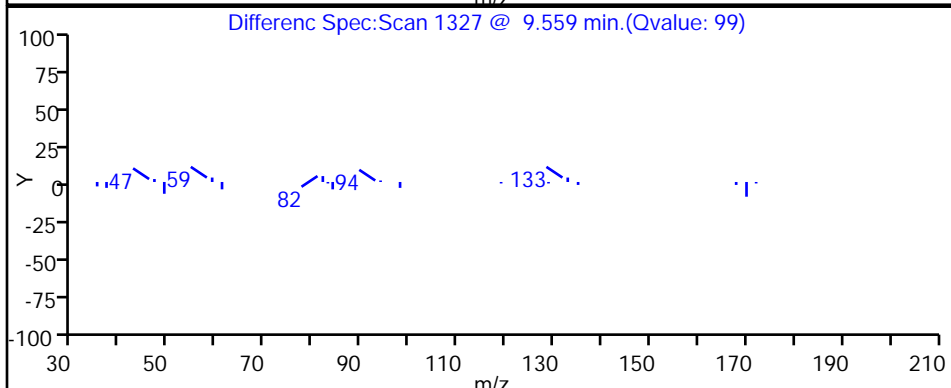
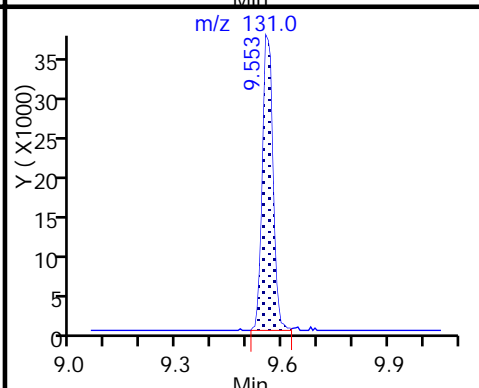
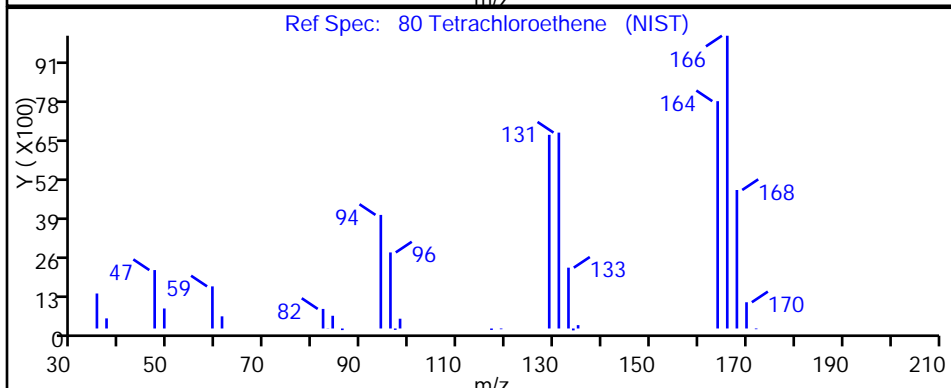
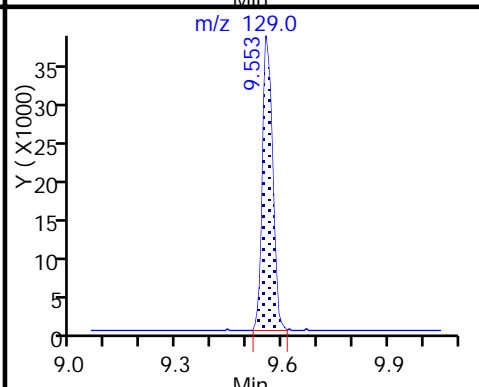
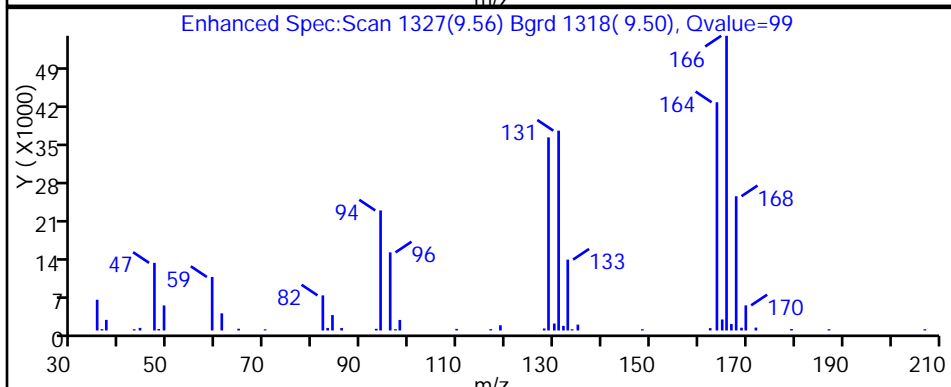
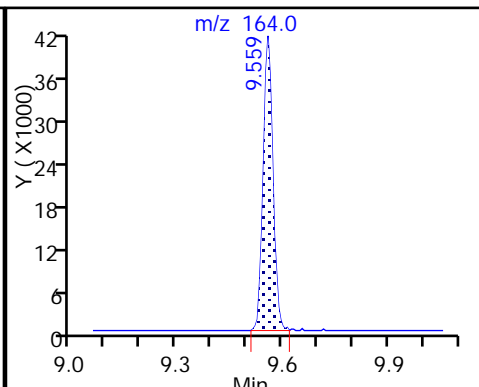
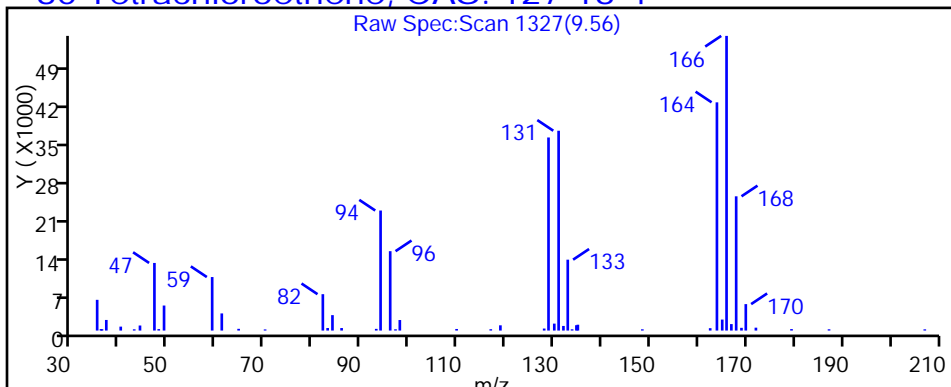
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



TestAmerica Pittsburgh

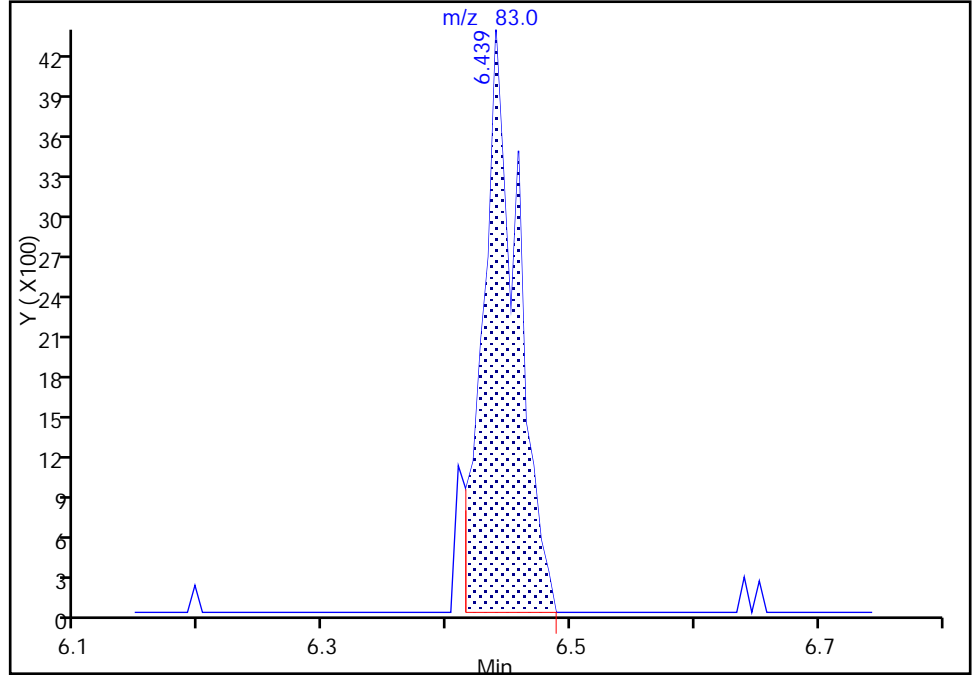
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Injection Date: 26-Oct-2017 02:55:30 Instrument ID: CHHP5  
Lims ID: 180-71467-C-8 Lab Sample ID: 180-71467-8  
Client ID: HD-QC1-0/1-1  
Operator ID: 034635 ALS Bottle#: 12 Worklist Smp#: 12  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

Signal: 1

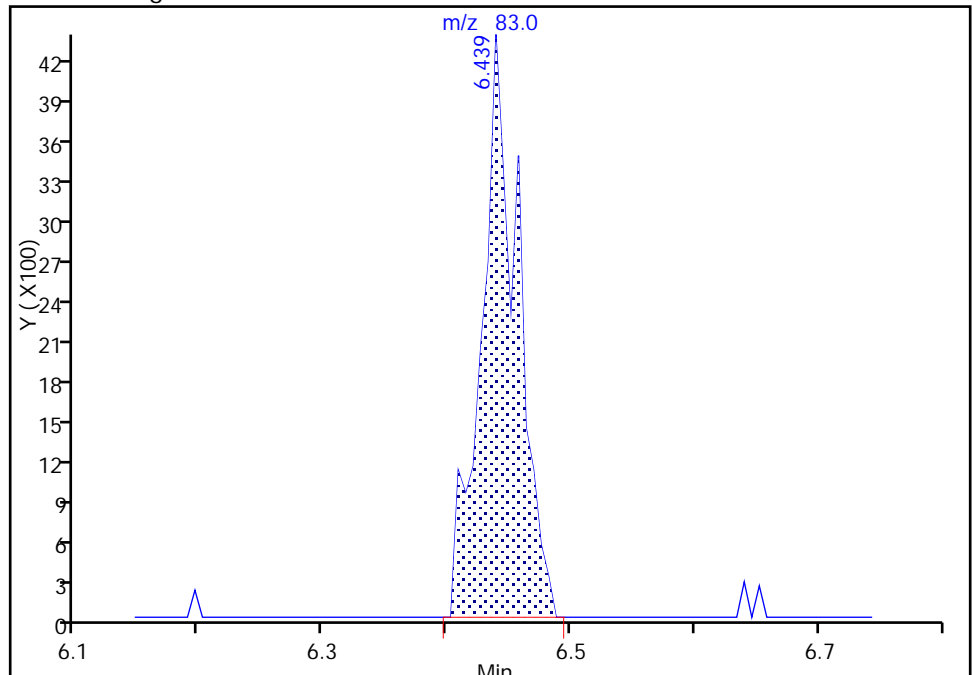
RT: 6.44  
Area: 8585  
Amount: 2.027489  
Amount Units: ng

Processing Integration Results



RT: 6.44  
Area: 8988  
Amount: 2.122665  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 26-Oct-2017 03:18:26  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-3 Lab Sample ID: 180-71467-9  
 Matrix: Water Lab File ID: 51025D13.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 13:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 03:19  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U *	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U ^c	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	1.0	U	1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	0.84	J	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-3 Lab Sample ID: 180-71467-9  
 Matrix: Water Lab File ID: 51025D13.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 13:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 03:19  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		65-121
2037-26-5	Toluene-d8 (Surr)	90		73-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
1868-53-7	Dibromofluoromethane (Surr)	109		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D13.D  
 Lims ID: 180-71467-C-9  
 Client ID: HD-QC1-0/1-3  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 03:19:30 ALS Bottle#: 13 Worklist Smp#: 13  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-013  
 Misc. Info.: 180-71467-C-9  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 04:00:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.364	4.384	-0.020	0	192908	1000.0	
* 2 Fluorobenzene (IS)	96	7.344	7.340	0.004	99	435136	50.0	
* 3 Chlorobenzene-d5	119	10.427	10.429	-0.002	86	108848	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.768	12.770	-0.002	96	158665	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.620	6.610	0.010	94	113957	54.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.985	6.987	-0.002	0	143643	56.3	
\$ 7 Toluene-d8 (Surr)	98	8.980	8.982	-0.002	94	387819	44.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.613	11.609	0.004	86	141111	45.1	
12 Chloromethane	50		1.891				ND	
13 Vinyl chloride	62		2.012				ND	
15 Bromomethane	94		2.335				ND	
16 Chloroethane	64		2.426				ND	
22 1,1-Dichloroethene	96		3.411				ND	
24 Acetone	43	3.537	3.539	-0.002	97	16549	14.5	
26 Carbon disulfide	76		3.703				ND	
31 Methylene Chloride	84		4.226				ND	
33 Acrylonitrile	53		4.609				ND	
34 trans-1,2-Dichloroethene	96		4.640				ND	
35 Methyl tert-butyl ether	73		4.664				ND	
37 1,1-Dichloroethane	63		5.266				ND	
45 cis-1,2-Dichloroethene	96		6.008				ND	
46 2-Butanone (MEK)	43		6.026				ND	
49 Chlorobromomethane	128		6.288				ND	
52 Chloroform	83		6.434				ND	
53 1,1,1-Trichloroethane	97		6.592				ND	
56 Carbon tetrachloride	117		6.762				ND	
58 Benzene	78	6.991	6.993	-0.002	42	8835	0.8350	
59 1,2-Dichloroethane	62		7.072				ND	
64 Trichloroethene	130		7.723				ND	
67 1,2-Dichloropropane	63		7.997				ND	
70 1,4-Dioxane	88		8.082				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.276				ND	
74 cis-1,3-Dichloropropene	75		8.720				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.872				ND	
76 Toluene	91	9.047	9.049	-0.002	95	45724	4.21	
77 trans-1,3-Dichloropropene	75		9.298				ND	
79 1,1,2-Trichloroethane	97		9.486				ND	
80 Tetrachloroethene	164		9.559				ND	
82 2-Hexanone	43		9.705				ND	
84 Chlorodibromomethane	129		9.857				ND	
85 Ethylene Dibromide	107		9.967				ND	
87 Chlorobenzene	112		10.459				ND	
89 1,1,1,2-Tetrachloroethane	131		10.551				ND	
90 Ethylbenzene	106	10.561	10.557	0.004	96	1780	0.4513	
91 m-Xylene & p-Xylene	106	10.689	10.684	0.004	0	5565	1.15	
92 o-Xylene	106	11.066	11.068	-0.002	91	2937	0.6395	
93 Styrene	104		11.092				ND	
94 Bromoform	173		11.274				ND	
99 1,1,2,2-Tetrachloroethane	83		11.749				ND	
S 133 Xylenes, Total	106				0		1.79	

**Reagents:**

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D13.D

Injection Date: 26-Oct-2017 03:19:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-C-9

Lab Sample ID: 180-71467-9

Worklist Smp#: 13

Client ID: HD-QC1-0/1-3

Purge Vol: 5.000 mL

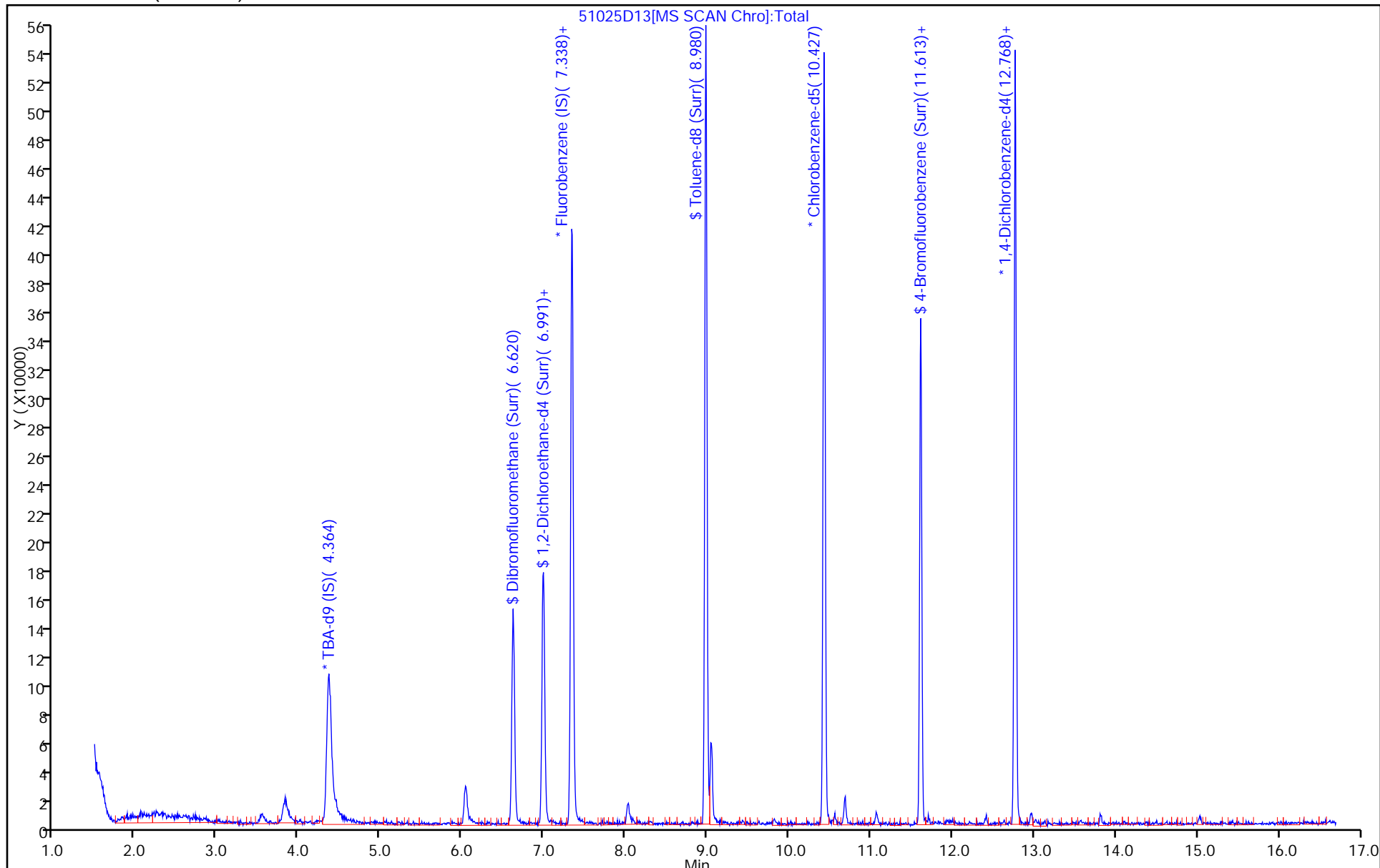
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D13.D  
 Lims ID: 180-71467-C-9  
 Client ID: HD-QC1-0/1-3  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 03:19:30 ALS Bottle#: 13 Worklist Smp#: 13  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-013  
 Misc. Info.: 180-71467-C-9  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 04:00:27

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	54.4	108.86
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	56.3	112.50
\$ 7 Toluene-d8 (Surr)	50.0	44.8	89.54
\$ 8 4-Bromofluorobenzene (Surr)	50.0	45.1	90.20

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D13.D

Injection Date: 26-Oct-2017 03:19:30

Instrument ID: CHHP5

Lims ID: 180-71467-C-9

Lab Sample ID: 180-71467-9

Client ID: HD-QC1-0/1-3

Operator ID: 034635

ALS Bottle#: 13

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

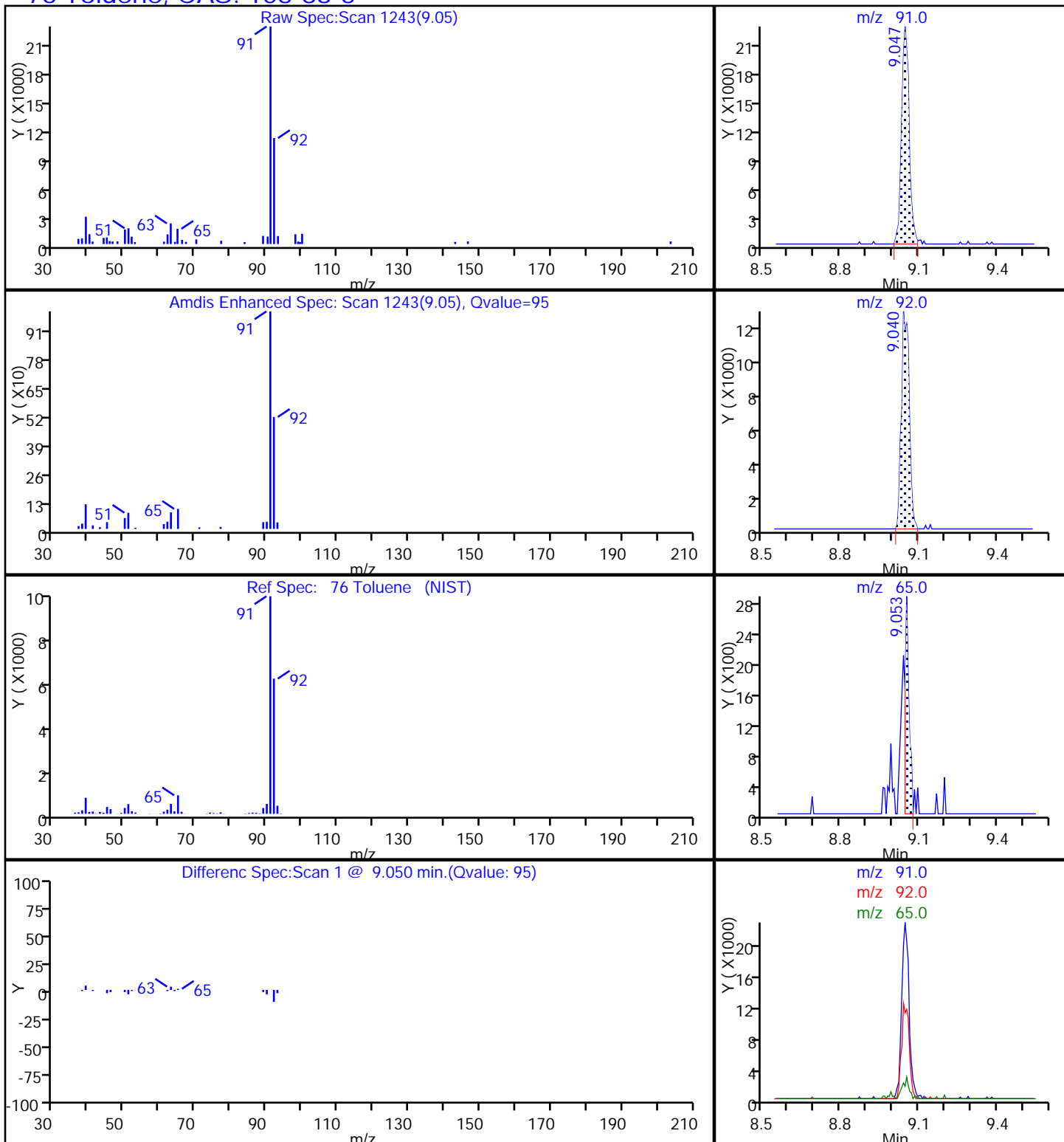
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

76 Toluene, CAS: 108-88-3



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-4 Lab Sample ID: 180-71467-10  
 Matrix: Water Lab File ID: 51025D14.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 13:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 03:43  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U *	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U ^c	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	3.5	J	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	1.0	U	1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	0.82	J	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC1-0/1-4 Lab Sample ID: 180-71467-10  
 Matrix: Water Lab File ID: 51025D14.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 13:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 03:43  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	118		65-121
2037-26-5	Toluene-d8 (Surr)	90		73-120
460-00-4	4-Bromofluorobenzene (Surr)	86		80-120
1868-53-7	Dibromofluoromethane (Surr)	113		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D14.D  
 Lims ID: 180-71467-A-10  
 Client ID: HD-QC1-0/1-4  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 03:43:30 ALS Bottle#: 14 Worklist Smp#: 14  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-014  
 Misc. Info.: 180-71467-A-10  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 04:53:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.360	4.384	-0.024	0	178075	1000.0	
* 2 Fluorobenzene (IS)	96	7.340	7.340	0.000	98	411727	50.0	
* 3 Chlorobenzene-d5	119	10.436	10.429	0.007	85	105919	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.771	12.770	0.001	96	154075	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.623	6.610	0.013	92	111456	56.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.988	6.987	0.001	0	142179	58.8	
\$ 7 Toluene-d8 (Surr)	98	8.982	8.982	0.000	94	377962	44.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.616	11.609	0.007	87	130580	42.9	
12 Chloromethane	50		1.891				ND	
13 Vinyl chloride	62		2.012				ND	
15 Bromomethane	94		2.335				ND	
16 Chloroethane	64		2.426				ND	
22 1,1-Dichloroethene	96		3.411				ND	
24 Acetone	43	3.533	3.539	-0.006	91	18830	17.5	
26 Carbon disulfide	76		3.703				ND	
31 Methylene Chloride	84		4.226				ND	
33 Acrylonitrile	53		4.609				ND	
34 trans-1,2-Dichloroethene	96		4.640				ND	
35 Methyl tert-butyl ether	73		4.664				ND	
37 1,1-Dichloroethane	63		5.266				ND	
45 cis-1,2-Dichloroethene	96		6.008				ND	
46 2-Butanone (MEK)	43		6.026				ND	
49 Chlorobromomethane	128		6.288				ND	
52 Chloroform	83		6.434				ND	
53 1,1,1-Trichloroethane	97		6.592				ND	
56 Carbon tetrachloride	117		6.762				ND	
58 Benzene	78	7.000	6.993	0.007	43	8231	0.8222	
59 1,2-Dichloroethane	62		7.072				ND	
64 Trichloroethene	130		7.723				ND	
67 1,2-Dichloropropane	63		7.997				ND	
70 1,4-Dioxane	88		8.082				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.276				ND	
74 cis-1,3-Dichloropropene	75		8.720				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.872				ND	
76 Toluene	91	9.049	9.049	0.000	96	43094	4.08	
77 trans-1,3-Dichloropropene	75		9.298				ND	
79 1,1,2-Trichloroethane	97		9.486				ND	
80 Tetrachloroethene	164		9.559				ND	
82 2-Hexanone	43		9.705				ND	
84 Chlorodibromomethane	129		9.857				ND	
85 Ethylene Dibromide	107		9.967				ND	
87 Chlorobenzene	112		10.459				ND	
89 1,1,1,2-Tetrachloroethane	131		10.551				ND	
90 Ethylbenzene	106	10.563	10.557	0.006	1	1552	0.4044	M
91 m-Xylene & p-Xylene	106	10.679	10.684	-0.005	0	7144	1.52	
92 o-Xylene	106	11.068	11.068	0.000	95	3044	0.6811	
93 Styrene	104		11.092				ND	
94 Bromoform	173		11.274				ND	
99 1,1,2,2-Tetrachloroethane	83		11.749				ND	
S 133 Xylenes, Total	106				0		2.20	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

VOA8260INT\_00075

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00074

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D14.D

Injection Date: 26-Oct-2017 03:43:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-A-10

Lab Sample ID: 180-71467-10

Worklist Smp#: 14

Client ID: HD-QC1-0/1-4

Purge Vol: 5.000 mL

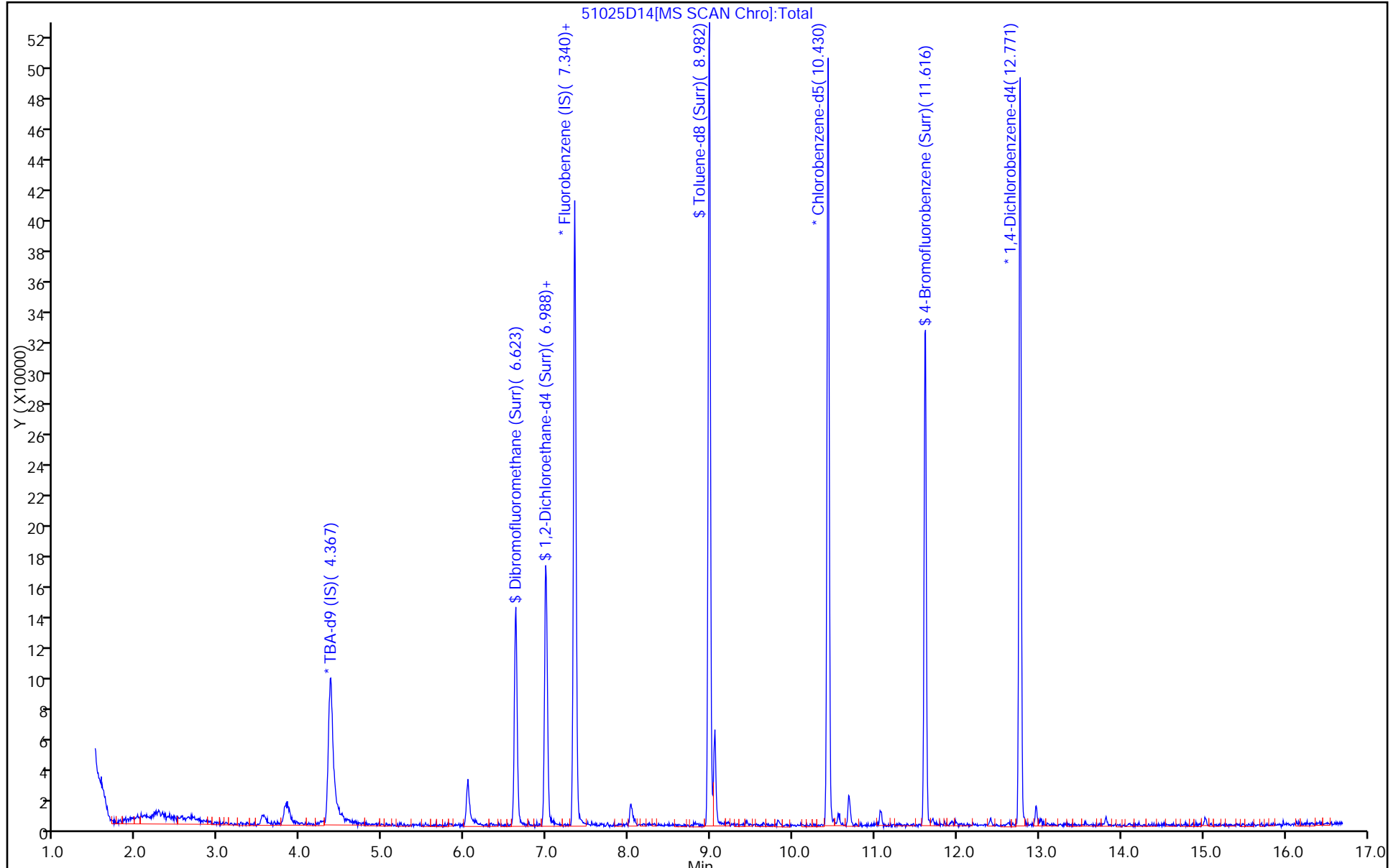
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D14.D  
 Lims ID: 180-71467-A-10  
 Client ID: HD-QC1-0/1-4  
 Sample Type: Client  
 Inject. Date: 26-Oct-2017 03:43:30 ALS Bottle#: 14 Worklist Smp#: 14  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-014  
 Misc. Info.: 180-71467-A-10  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 04:53:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	56.3	112.52
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	58.8	117.69
\$ 7 Toluene-d8 (Surr)	50.0	44.8	89.67
\$ 8 4-Bromofluorobenzene (Surr)	50.0	42.9	85.78

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D14.D

Injection Date: 26-Oct-2017 03:43:30

Instrument ID: CHHP5

Lims ID: 180-71467-A-10

Lab Sample ID: 180-71467-10

Client ID: HD-QC1-0/1-4

Operator ID: 034635

ALS Bottle#: 14

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

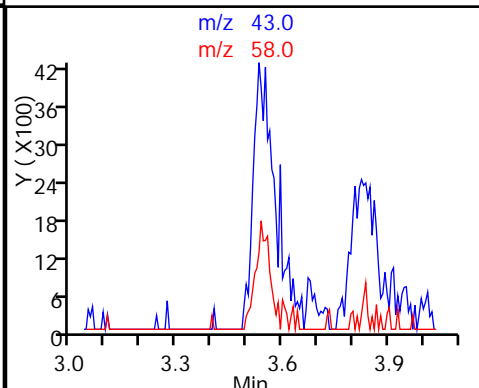
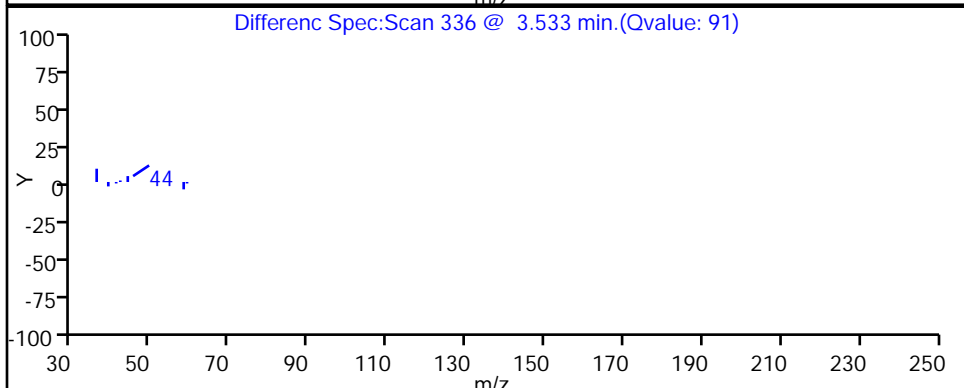
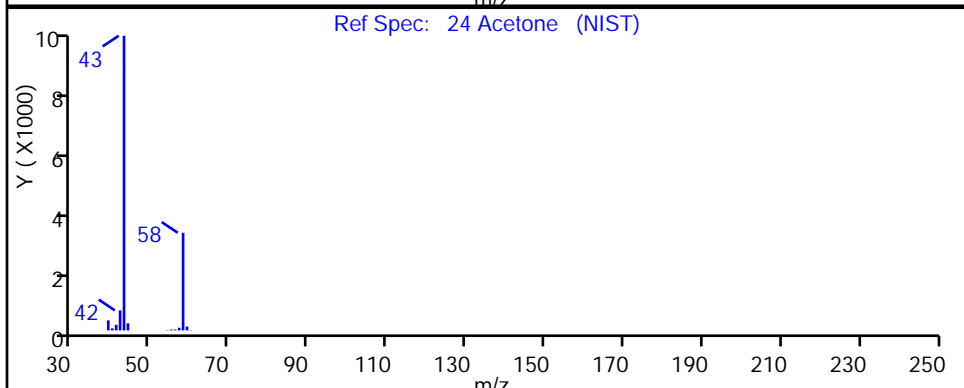
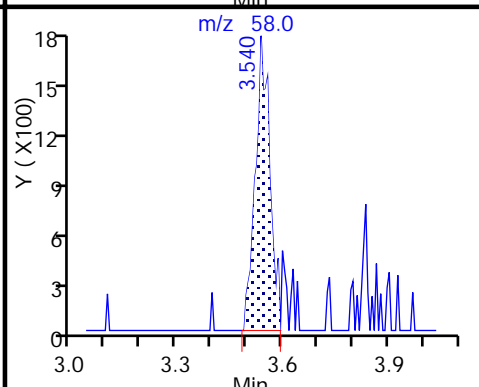
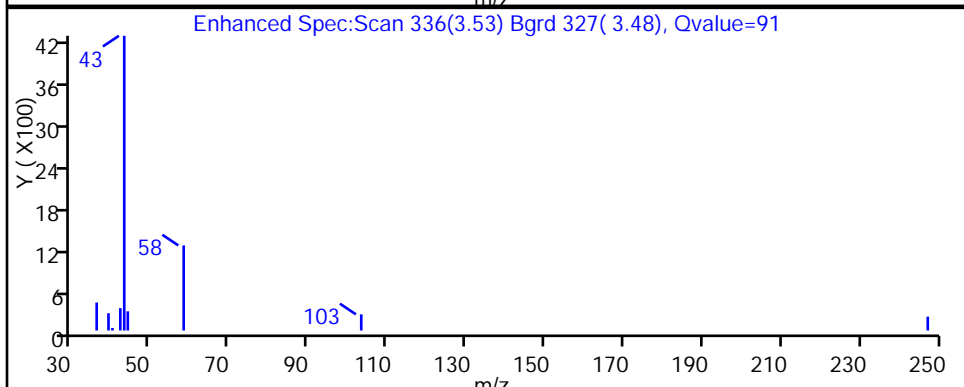
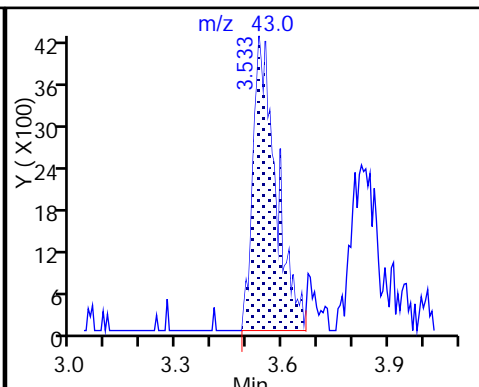
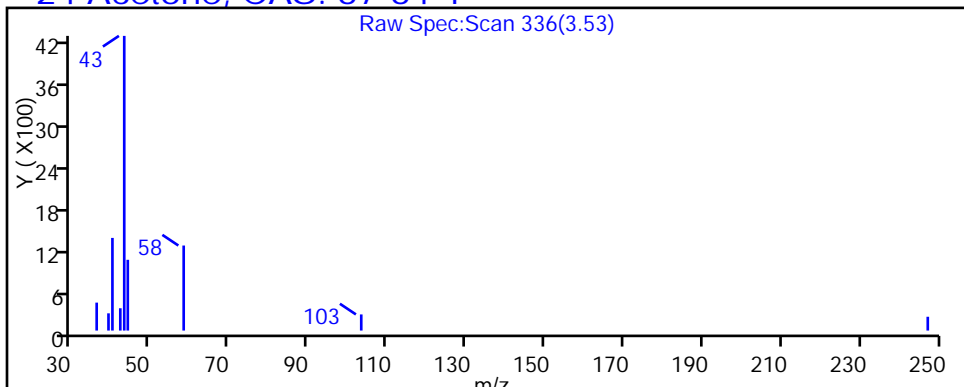
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

24 Acetone, CAS: 67-64-1



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D14.D

Injection Date: 26-Oct-2017 03:43:30

Instrument ID: CHHP5

Lims ID: 180-71467-A-10

Lab Sample ID: 180-71467-10

Client ID: HD-QC1-0/1-4

Operator ID: 034635

ALS Bottle#: 14

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

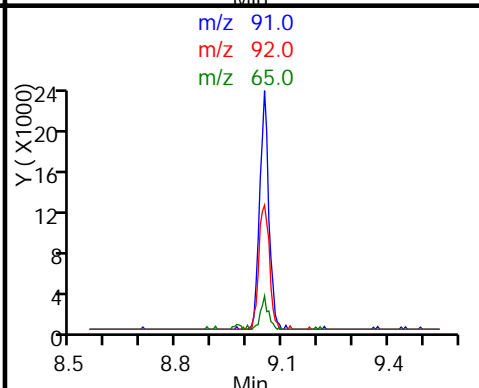
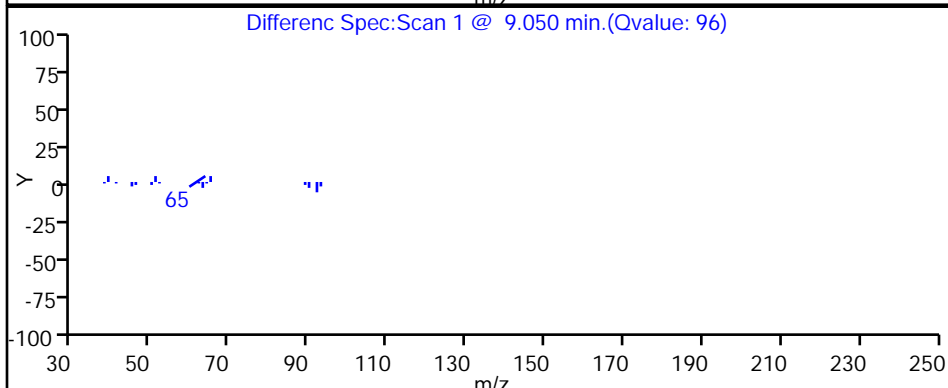
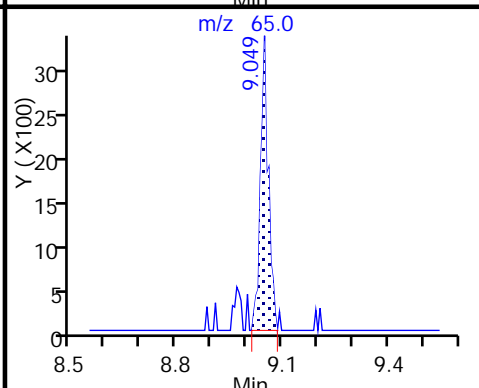
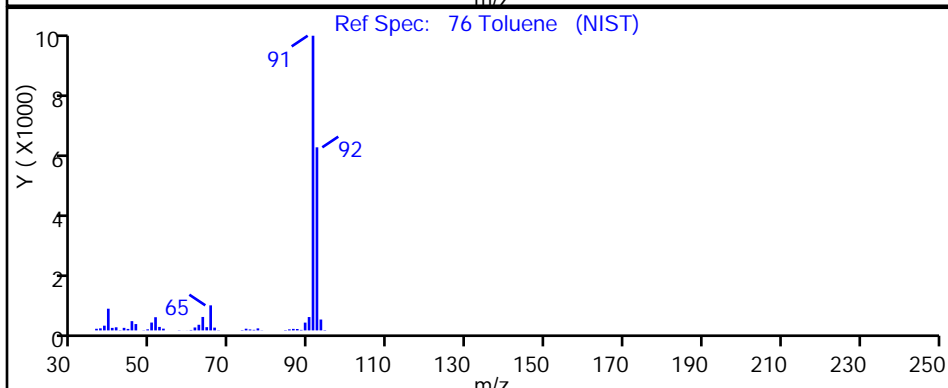
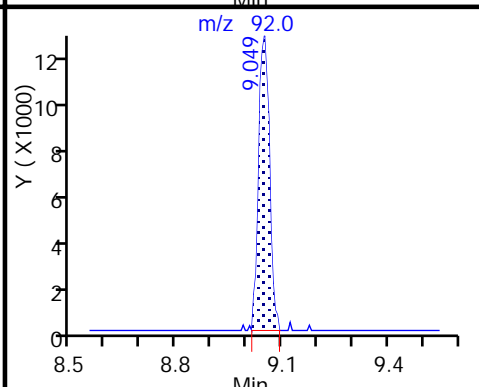
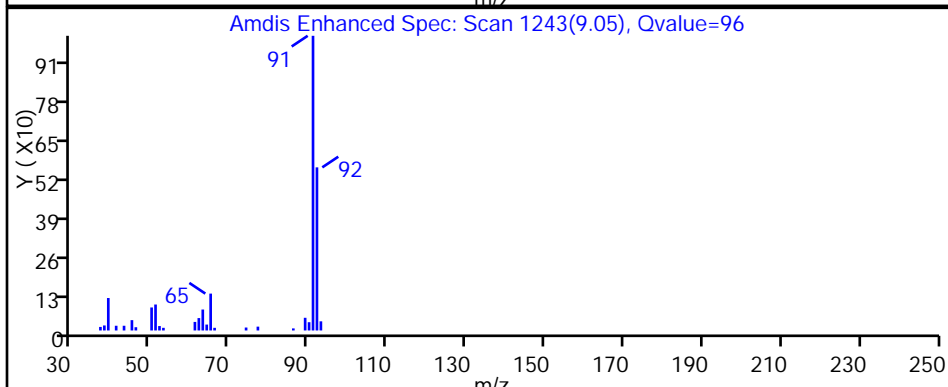
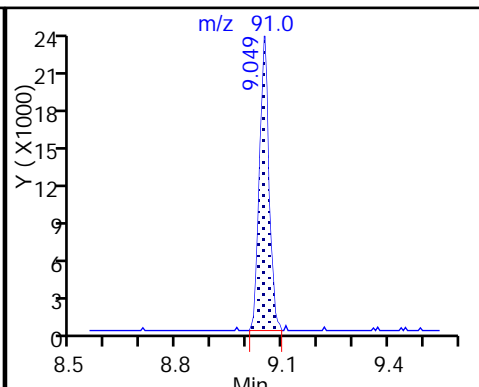
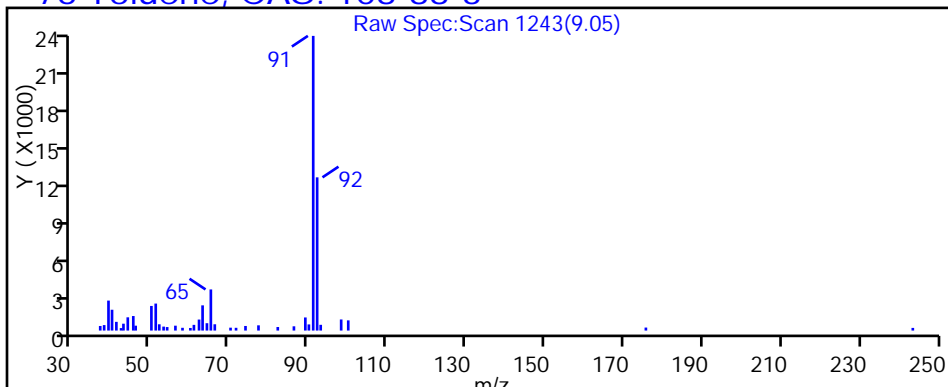
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

76 Toluene, CAS: 108-88-3



TestAmerica Pittsburgh

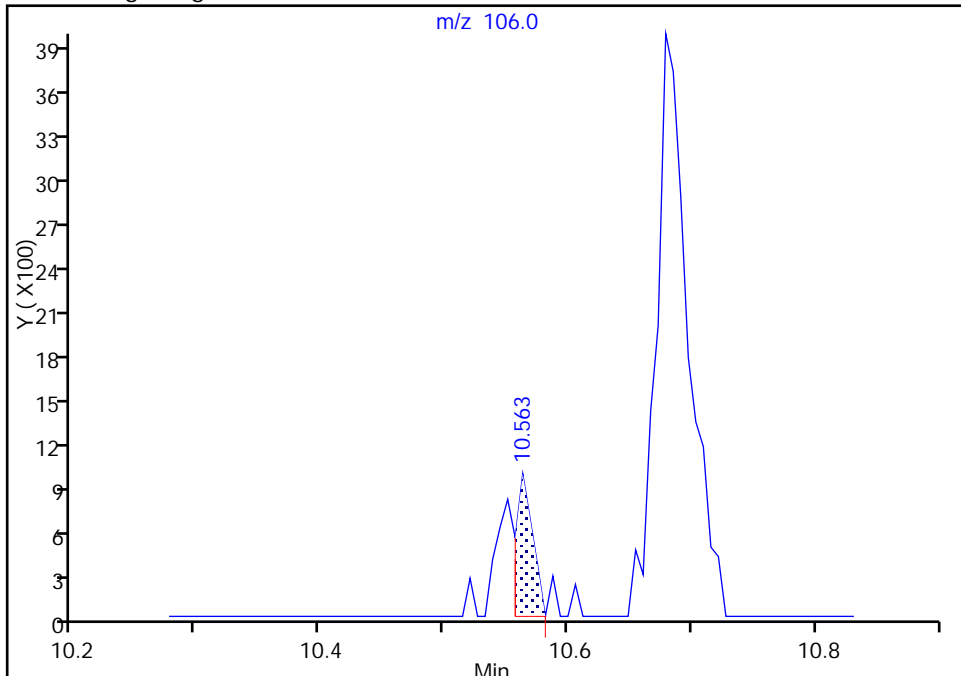
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Injection Date: 26-Oct-2017 03:43:30 Instrument ID: CHHP5  
Lims ID: 180-71467-A-10 Lab Sample ID: 180-71467-10  
Client ID: HD-QC1-0/1-4  
Operator ID: 034635 ALS Bottle#: 14 Worklist Smp#: 14  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Signal: 1

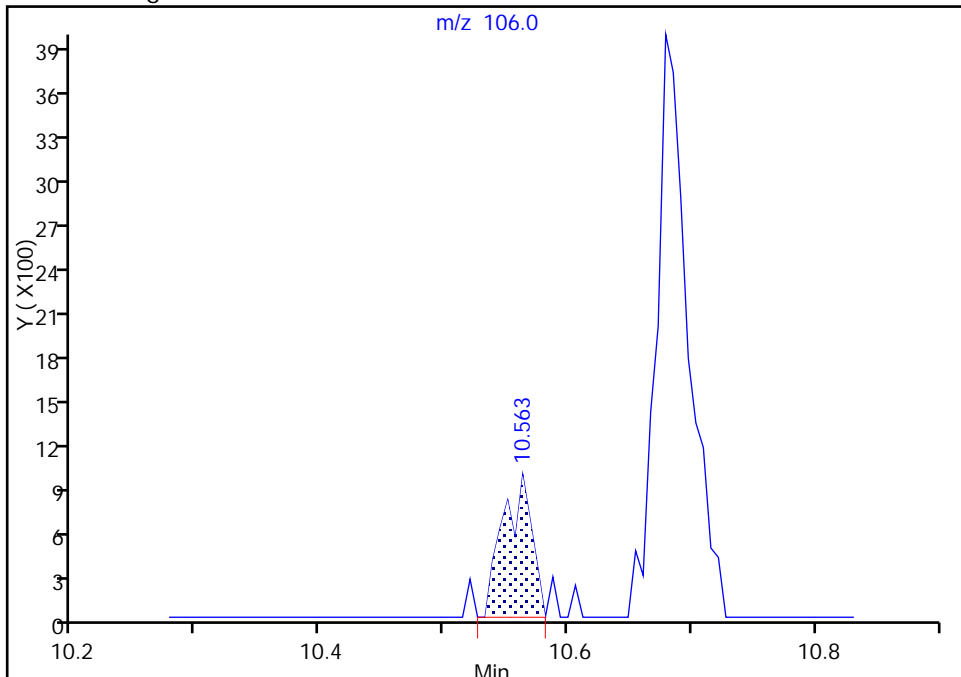
RT: 10.56  
Area: 903  
Amount: 0.235264  
Amount Units: ng

Processing Integration Results



RT: 10.56  
Area: 1552  
Amount: 0.404352  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 26-Oct-2017 04:53:21  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-218218/2	50727D02.D
Level 2	IC 180-218218/3	50727D03.D
Level 3	ICIS 180-218218/4	50727D04.D
Level 4	IC 180-218218/5	50727D05.D
Level 5	IC 180-218218/6	50727D06.D
Level 6	IC 180-218218/10	50727D10.D
Level 7	IC 180-218218/8	50727D08.D
Level 8	IC 180-218218/11	50727D11.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8														
Dichlorodifluoromethane	0.3099 0.3034	0.3143 0.2538	0.2964 0.2820	0.2910	0.2753	Ave		0.2907			0.1000	6.9	20.0				
Chloromethane	0.3638 0.2790	0.2935 0.2586	0.2871 0.2672	0.2979	0.2905	Ave		0.2922			0.1000	10.9	20.0				
Vinyl chloride	0.3612 0.2960	0.3073 0.2570	0.3014 0.2855	0.2838	0.2802	Ave		0.2965			0.1000	10.2	20.0				
1,3-Butadiene	0.3317 0.2714	0.2771 0.2281	0.2660 0.2684	0.2619	0.2505	Ave		0.2694			0.0100	10.9	20.0				
Bromomethane	0.1274 0.1338	0.1569 0.1290	0.1507 0.1244	0.1438	0.1556	Ave		0.1402			0.0500	9.4	20.0				
Chloroethane	0.1972 0.1593	0.1757 0.1437	0.1605 0.1363	0.1653	0.1659	Ave		0.1630			0.0500	11.5	20.0				
Trichlorofluoromethane	0.4130 0.3605	0.3896 0.3164	0.3801 0.3348	0.3631	0.3573	Ave		0.3643			0.1000	8.4	20.0				
Ethyl ether	0.2690 0.2226	0.2473 0.2272	0.2344 0.2016	0.2419	0.2520	Ave		0.2370			0.0100	8.6	20.0				
Acrolein	0.0588 0.0564	0.0546 0.0639	0.0629 0.0550	0.0633	0.0629	Ave		0.0597			0.0100	6.7	20.0				
1,1-Dichloroethene	0.2633 0.2529	0.2525 0.2180	0.2438 0.2452	0.2449	0.2377	Ave		0.2448			0.1000	5.4	20.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3346 0.2678	0.2745 0.2382	0.2615 0.2547	0.2644	0.2534	Ave		0.2686			0.1000	10.7	20.0				
Acetone	0.1396 0.1048	0.1447 0.1163	0.1388 0.1038	0.1460	0.1519	Ave		0.1308			0.0500	14.8	20.0				
Iodomethane	0.4213 0.3803	0.3860 0.3716	0.3712 0.3619	0.3906	0.3928	Ave		0.3845			0.0100	4.8	20.0				
Carbon disulfide	0.5698 ++++	0.4896 0.5397	0.4946 0.6108	0.5168	0.5392	Ave		0.5372			0.1000	8.0	20.0				

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 Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 5													
Allyl chloride	0.1501 0.1710	0.1485 0.1632	0.1541 0.1645	0.1561	0.1579	Ave		0.1582			0.0100	4.8		20.0			
Methyl acetate	0.2888 0.2364	0.2463 0.2614	0.2631 0.2382	0.2688	0.2686	Ave		0.2589			0.1000	6.8		20.0			
Methylene Chloride	0.4748 0.2821	0.3152 0.2910	0.3044 0.2676	0.3112	0.3108	Lin2	0.9532	0.2841			0.1000				0.9980		0.9900
tert-Butyl alcohol	1.3346 1.2872	1.1570 1.0277	1.1638 1.2343	1.1314	1.1253	Ave		1.1826			0.0100	8.3		20.0			
Acrylonitrile	0.1353 0.1106	0.1251 0.1245	0.1313 0.1150	0.1320	0.1333	Ave		0.1259			0.0100	7.1		20.0			
trans-1,2-Dichloroethene	0.3167 0.2789	0.2730 0.2547	0.2727 0.2653	0.2850	0.2851	Ave		0.2789			0.1000	6.6		20.0			
Methyl tert-butyl ether	0.7081 0.7482	0.7314 0.7800	0.7230 0.7142	0.7872	0.7909	Ave		0.7479			0.1000	4.5		20.0			
Hexane	0.4597 0.3561	0.3588 0.3156	0.3449 0.3625	0.3424	0.3242	Ave		0.3580			0.0100	12.4		20.0			
1,1-Dichloroethane	0.5228 0.4797	0.4979 0.4638	0.4852 0.4528	0.4864	0.4910	Ave		0.4850			0.2000	4.4		20.0			
Vinyl acetate	0.5018 0.5003	0.4274 0.5345	0.4556 0.5012	0.5130	0.5116	Ave		0.4932			0.0100	7.0		20.0			
2,2-Dichloropropane	0.0696 0.0640	0.0591 0.0559	0.0577 0.0619	0.0627	0.0632	Ave		0.0617			0.0100	6.9		20.0			
cis-1,2-Dichloroethene	0.3297 0.3143	0.3194 0.3060	0.3200 0.2963	0.3326	0.3338	Ave		0.3190			0.1000	4.1		20.0			
2-Butanone (MEK)	0.1854 0.1607	0.1969 0.1772	0.1989 0.1584	0.2064	0.2051	Ave		0.1861			0.0500	10.2		20.0			
Bromochloromethane	0.1517 0.1366	0.1414 0.1398	0.1402 0.1299	0.1453	0.1494	Ave		0.1418			0.0100	4.9		20.0			
Tetrahydrofuran	0.1371 0.0928	0.0982 0.1088	0.1088 0.1003	0.1130	0.1079	Ave		0.1084			0.0100	12.4		20.0			
Chloroform	0.5466 0.4636	0.4996 0.4621	0.4713 0.4342	0.4992	0.4977	Ave		0.4843			0.2000	7.0		20.0			
1,1,1-Trichloroethane	0.3786 0.3800	0.3677 0.3465	0.3637 0.3610	0.3661	0.3690	Ave		0.3666			0.1000	2.9		20.0			
Cyclohexane	0.4979 0.4744	0.4616 0.4108	0.4435 0.4590	0.4424	0.4292	Ave		0.4524			0.1000	6.0		20.0			
Carbon tetrachloride	0.3181 0.3198	0.2990 0.2880	0.3018 0.3038	0.3054	0.3047	Ave		0.3051			0.1000	3.3		20.0			
1,1-Dichloropropene	0.4064 0.4059	0.4083 0.3679	0.3990 0.3876	0.4006	0.3928	Ave		0.3961			0.0100	3.4		20.0			

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 Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 5													
Isobutyl alcohol	0.0097 0.0085	0.0091 0.0105	0.0102 0.0094	0.0111	0.0112	Ave		0.0099		*	0.0100	9.6	20.0				
Benzene	1.3787 1.1520	1.2628 1.1081	1.2398 1.0692	1.2590	1.2563	Ave		1.2157			0.5000	8.2	20.0				
1,2-Dichloroethane	0.3884 0.3320	0.3554 0.3421	0.3528 0.3189	0.3753	0.3703	Ave		0.3544			0.1000	6.5	20.0				
n-Heptane	0.3037 0.2967	0.3011 0.2552	0.2860 0.3036	0.2755	0.2684	Ave		0.2863			0.0100	6.4	20.0				
Trichloroethene	0.3229 0.3036	0.3087 0.2884	0.3052 0.2920	0.3101	0.3167	Ave		0.3059			0.2000	3.8	20.0				
Methylcyclohexane	0.4727 0.4875	0.4672 0.4232	0.4697 0.4715	0.4601	0.4491	Ave		0.4626			0.1000	4.2	20.0				
1,2-Dichloropropane	0.3012 0.2794	0.2779 0.2782	0.2782 0.2612	0.2913	0.2975	Ave		0.2831			0.1000	4.6	20.0				
1,4-Dioxane	0.0022 0.0027	0.0028 0.0030	0.0031 0.0031	0.0030	0.0032	Ave		0.0029		*	0.0100	11.4	20.0				
Dibromomethane	0.1595 0.1606	0.1708 0.1667	0.1638 0.1549	0.1734	0.1774	Ave		0.1659			0.0100	4.6	20.0				
Bromodichloromethane	0.3001 0.3336	0.3125 0.3351	0.3169 0.3110	0.3438	0.3519	Ave		0.3256			0.2000	5.6	20.0				
2-Chloroethyl vinyl ether	0.1669 0.2025	0.1917 0.2176	0.2032 0.2031	0.2200	0.2248	Ave		0.2037			0.0100	9.1	20.0				
cis-1,3-Dichloropropene	0.3596 0.4128	0.3596 0.4158	0.3786 0.3959	0.4116	0.4298	Ave		0.3955			0.2000	6.8	20.0				
4-Methyl-2-pentanone (MIBK)	1.3560 1.1652	1.2491 1.2232	1.3592 1.1532	1.3610	1.3926	Ave		1.2824			0.1000	7.5	20.0				
Toluene	6.1005 4.5990	5.6903 4.2081	5.2159 4.0277	5.0185	5.0243	Ave		4.9855			0.4000	14.1	20.0				
trans-1,3-Dichloropropene	1.2257 1.4397	1.2796 1.4086	1.2851 1.3247	1.3956	1.4937	Ave		1.3566			0.1000	6.8	20.0				
Ethyl methacrylate	1.3604 1.6673	1.5623 1.6591	1.6724 1.5738	1.7698	1.8222	Ave		1.6359			0.0100	8.7	20.0				
1,1,2-Trichloroethane	1.2522 0.9633	1.0992 0.9427	1.0403 0.8887	1.0530	1.0694	Ave		1.0386			0.1000	10.8	20.0				
Tetrachloroethene	1.1481 0.9182	1.0929 0.8058	0.9505 0.8459	0.9238	0.9211	Ave		0.9508			0.2000	12.2	20.0				
1,3-Dichloropropane	2.2370 1.7852	2.0694 1.7532	1.9307 1.6348	1.9958	1.9532	Ave		1.9199			0.0100	10.0	20.0				
2-Hexanone	0.9818 0.8998	0.9941 0.9190	1.0485 0.8780	1.0518	1.0958	Ave		0.9836			0.1000	8.1	20.0				

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 Pittsburgh

Job No.: 180-71467-1

Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51

Calibration End Date: 07/27/2017 04:24

Calibration ID: 35038

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8														
Dibromochloromethane	0.7989 0.9016	0.8620 0.8947	0.8650 0.8322	0.9093	0.9598	Ave		0.8779			0.1000	5.7	20.0				
1,2-Dibromoethane (EDB)	1.1425 1.0146	1.0956 1.0059	1.0726 0.9575	1.1227	1.1100	Ave		1.0652			0.1000	6.1	20.0				
3-Chlorobenzotrifluoride	2.1508 1.6103	1.7646 1.4397	1.6777 1.5967	1.7670	1.7382	Ave		1.7181			0.0100	12.0	20.0				
Chlorobenzene	4.0368 3.0317	3.5186 2.8231	3.2468 2.6869	3.3119	3.3091	Ave		3.2456			0.5000	13.0	20.0				
4-Chlorobenzotrifluoride	1.8614 1.5230	1.6468 1.3432	1.5641 1.5178	1.6419	1.5859	Ave		1.5855			0.0100	9.3	20.0				
1,1,1,2-Tetrachloroethane	1.0682 1.0211	1.0658 0.9781	1.0366 0.9303	1.0666	1.0896	Ave		1.0321			0.0100	5.2	20.0				
Ethylbenzene	1.9199 1.7723	1.9530 1.6113	1.8804 1.6150	1.8616	1.8815	Ave		1.8119			0.1000	7.3	20.0				
m-Xylene & p-Xylene	2.1686 2.2054	2.4439 2.0173	2.3106 1.9980	2.2675	2.3006	Ave		2.2140			0.1000	6.8	20.0				
o-Xylene	2.1421 2.0826	2.2379 1.9206	2.1746 1.8793	2.2085	2.2321	Ave		2.1097			0.3000	6.6	20.0				
Styrene	3.6332 3.4371	3.9143 3.2595	3.7554 3.0478	3.7413	3.7778	Ave		3.5708			0.3000	8.3	20.0				
Bromoform	0.5105 0.5727	0.4852 0.5813	0.5106 0.5484	0.5622	0.5938	Ave		0.5456			0.1000	7.2	20.0				
2-Chlorobenzotrifluoride	1.7885 1.5489	1.7322 1.4506	1.6281 1.5406	1.7502	1.7146	Ave		1.6442			0.0100	7.4	20.0				
Isopropylbenzene	5.5110 4.9386	5.7732 4.4163	5.4683 4.3345	5.4199	5.3367	Ave		5.1498			0.1000	10.3	20.0				
Bromobenzene	0.9987 0.9743	0.9872 0.9390	0.9377 0.9146	0.9980	1.0140	Ave		0.9704			0.0100	3.7	20.0				
1,1,2,2-Tetrachloroethane	1.7609 1.4046	1.6228 1.4415	1.5952 1.3351	1.5862	1.5551	Ave		1.5377			0.3000	8.9	20.0				
trans-1,4-Dichloro-2-butene	0.2598 0.2949	0.2743 0.2979	0.2825 0.3083	0.3195	0.3037	Ave		0.2926			0.0100	6.6	20.0				
1,2,3-Trichloropropane	0.4104 0.3768	0.3859 0.3949	0.4160 0.3815	0.4181	0.4204	Ave		0.4005			0.0100	4.4	20.0				
N-Propylbenzene	1.0871 1.1604	1.1279 1.0214	1.1341 1.0987	1.1152	1.1268	Ave		1.1089			0.0100	3.8	20.0				
2-Chlorotoluene	0.9007 0.9835	0.9855 0.9238	0.9604 0.9321	0.9790	1.0033	Ave		0.9585			0.0100	3.7	20.0				
3-Chlorotoluene	1.0064 1.0049	1.0309 0.9798	1.0614 1.0388	1.1086	1.1105	Ave		1.0427			0.0100	4.6	20.0				

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 Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8														
1,3,5-Trimethylbenzene	3.0303 3.1789	3.4364 2.8871	3.3130 2.9071	3.3121	3.3198	Ave		3.1731			0.0100	6.6	20.0				
4-Chlorotoluene	1.0553 1.0614	1.0524 0.9741	1.0341 0.9970	1.0305	1.0761	Ave		1.0351			0.0100	3.3	20.0				
tert-Butylbenzene	2.5746 2.7227	2.8017 2.3880	2.7530 2.5138	2.7587	2.7116	Ave		2.6530			0.0100	5.5	20.0				
1,2,4-Trimethylbenzene	3.1254 3.2212	3.4166 2.9826	3.3711 2.9395	3.3815	3.3664	Ave		3.2255			0.0100	5.9	20.0				
3,4-Dichlorobenzotrifluoride	0.9400 0.7764	0.7679 0.7160	0.7941 0.8232	0.8410	0.8065	Ave		0.8081			0.0100	8.1	20.0				
sec-Butylbenzene	3.7533 3.7112	3.9865 3.2645	3.8932 3.4225	3.8001	3.7790	Ave		3.7013			0.0100	6.5	20.0				
1,3-Dichlorobenzene	1.8909 1.6927	1.7949 1.6042	1.7488 1.5884	1.7678	1.7840	Ave		1.7340			0.6000	5.8	20.0				
4-Isopropyltoluene	2.9547 3.1220	3.2883 2.7812	3.2665 2.8873	3.2019	3.1605	Ave		3.0828			0.0100	6.0	20.0				
1,4-Dichlorobenzene	1.9782 1.7336	1.8319 1.6481	1.8074 1.6177	1.8136	1.8124	Ave		1.7804			0.5000	6.4	20.0				
2,4-Dichlorobenzotrifluoride	0.7762 0.7410	0.7684 0.6560	0.7174 0.7931	0.7890	0.7781	Ave		0.7524			0.0100	6.2	20.0				
2,5-Dichlorobenzotrifluoride	0.8709 0.7991	0.7991 0.7661	0.8033 0.8193	0.8304	0.8133	Ave		0.8127			0.0100	3.7	20.0				
n-Butylbenzene	2.4429 2.5807	2.6260 2.2815	2.6042 2.4382	2.5661	2.5760	Ave		2.5144			0.0100	4.7	20.0				
1,2-Dichlorobenzene	1.8724 1.5966	1.7261 1.5319	1.6636 1.4748	1.6744	1.6818	Ave		1.6527			0.4000	7.4	20.0				
1,2-Dibromo-3-Chloropropane	0.1676 0.1857	0.1676 0.2001	0.1774 0.1873	0.1829	0.1992	Ave		0.1835			0.0500	6.8	20.0				
2,4- & 2,5- & 2,6- Dichlorotoluene	0.9836 1.0182	1.0277 0.9802	1.0819 1.0447	1.1339	1.1166	Ave		1.0483			0.0100	5.5	20.0				
2,3- & 3,4- Dichlorotoluene	0.9469 1.0658	1.0253 1.0486	1.0886 1.1261	1.1868	1.1843	Ave		1.0841			0.0100	7.5	20.0				
1,2,4-Trichlorobenzene	0.7563 0.7556	0.7184 0.7286	0.7717 0.7766	0.7671	0.7765	Ave		0.7563			0.2000	2.9	20.0				
Hexachlorobutadiene	0.2941 0.2697	0.2848 0.2377	0.2809 0.2898	0.2829	0.2739	Ave		0.2767			0.0100	6.4	20.0				
Naphthalene	2.0979 2.6004	2.2731 2.6494	2.6660 2.6327	2.8062	2.8819	Ave		2.5759			0.0100	10.2	20.0				
1,2,3-Trichlorobenzene	0.7106 0.6701	0.6788 0.6564	0.6707 0.7130	0.7070	0.7206	Ave		0.6909			0.0100	3.5	20.0				

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 Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8														
2,4,5-Trichlorotoluene	0.3224 0.3475	0.2818 0.3346	0.3064 ++++	0.3498	0.3564	Ave		0.3284			0.0100	8.2		20.0			
2,3,6-Trichlorotoluene	0.2545 0.3128	0.2731 0.3131	0.3085 ++++	0.3418	0.3347	Ave		0.3055			0.0100	10.3		20.0			
Dibromofluoromethane (Surr)	0.2565 0.2365	0.2433 0.2326	0.2366 0.2242	0.2475	0.2474	Ave		0.2406				4.2		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3401 0.2693	0.3050 0.2801	0.2948 0.2619	0.3004	0.2957	Ave		0.2934				8.3		20.0			
Toluene-d8 (Surr)	5.1161 3.6702	4.5030 3.3148	4.0781 3.3147	3.9154	3.9228	Ave		3.9794				15.2		20.0			
4-Bromofluorobenzene (Surr)	1.6317 1.3781	1.5302 1.3139	1.4390 1.2793	1.4518	1.4735	Ave		1.4372				8.0		20.0			

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 Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-218218/2	50727D02.D
Level 2	IC 180-218218/3	50727D03.D
Level 3	ICIS 180-218218/4	50727D04.D
Level 4	IC 180-218218/5	50727D05.D
Level 5	IC 180-218218/6	50727D06.D
Level 6	IC 180-218218/10	50727D10.D
Level 7	IC 180-218218/8	50727D08.D
Level 8	IC 180-218218/11	50727D11.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	16788 647803	84559 569791	159957 857078	226899	286388	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	19706 595751	78965 580608	154943 811941	232300	302276	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	19568 632153	82670 577090	162634 867536	221295	291558	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	17968 579584	74553 512032	143576 815610	204212	260580	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Ave	6901 285707	42224 289712	81346 377950	112119	161865	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	10685 340168	47273 322589	86601 414342	128899	172552	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	22371 769762	104824 710415	205127 1017488	283194	371684	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	14571 475422	66542 510033	126496 612640	188662	262150	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	63695 154738	73476 179414	101829 183852	115103	130923	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	14263 540044	67928 489503	131576 745282	190985	247279	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	18126 571742	73846 534815	141127 774058	206212	263603	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	37823 447756	77890 522287	149782 630881	227784	316026	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	22822 811997	103869 834240	200342 1099819	304618	408622	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	30868 +++++	131730 1211678	266935 1856339	403056	561008	5.00 +++++	25.0 200	50.0 250	75.0	100
Allyl chloride	FB	Ave	8133 365237	39946 366340	83167 500032	121734	164305	5.00 175	25.0 200	50.0 250	75.0	100

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Methyl acetate	FB	Ave	31286 1009713	132543 1173609	283974 1447736	419273	558912	10.0 350	50.0 400	100 500	150	200
Methylene Chloride	FB	Lin2	25720 602402	84822 653341	164284 813282	242665	323324	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBAd 9	Ave	16447 524619	64738 519054	139891 568135	204334	283777	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	73302 2362587	336508 2794353	708552 3495451	1029651	1387354	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	17158 595572	73445 571864	147191 806194	222245	296608	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	38357 1597553	196780 1751345	390184 2170401	613933	822838	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	24902 760411	96542 708650	186124 1101558	266987	337300	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	28319 1024340	133976 1041269	261874 1376176	379320	510811	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	27185 1068205	115000 1200052	245879 1523056	400099	532250	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	3769 136605	15889 125406	31118 188250	48893	65750	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	17858 671208	85931 687049	172690 900432	259385	347303	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	50216 686266	105960 795793	214731 962704	321867	426755	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	8216 291754	38047 313977	75687 394763	113290	155416	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	14858 396477	52866 488432	117485 609910	176266	224432	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Ave	29608 989929	134431 1037446	254354 1319564	389323	517765	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	20508 811476	98927 777880	196286 1097196	285488	383868	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	26974 1012965	124196 922281	239333 1394833	345041	446560	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	17231 682784	80446 646700	162849 923177	238173	317033	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	22014 866715	109851 825970	215336 1178056	312373	408627	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	13122 452876	61305 587752	136973 715201	216532	290317	125 4375	625 5000	1250 6250	1875	2500
Benzene	FB	Ave	74686 2459963	339765 2487856	669098 3249284	981851	1307056	5.00 175	25.0 200	50.0 250	75.0	100



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	21038 708898	95627 767974	190422 969148	292683	385206	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	16453 633483	81002 573064	154370 922592	214813	279216	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	17490 648262	83072 647404	164695 887332	241861	329499	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	25605 1041060	125697 950167	253511 1432791	358781	467268	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	16316 596512	74777 624637	150135 793667	227133	309491	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	2333 115916	15162 135844	33209 187034	46920	65688	100 3500	500 4000	1000 5000	1500	2000
Dibromomethane	FB	Ave	8641 342853	45949 374289	88395 470836	135198	184529	5.00 175	25.0 200	50.0 250	75.0	100
Bromodichloromethane	FB	Ave	16257 712434	84070 752352	171049 945026	268080	366097	5.00 175	25.0 200	50.0 250	75.0	100
2-Chloroethyl vinyl ether	FB	Ave	18086 864836	103158 977190	219328 1234429	343066	467677	10.0 350	50.0 400	100 500	150	200
cis-1,3-Dichloropropene	FB	Ave	19479 881560	96744 933591	204344 1203144	320956	447138	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Ave	79892 1265241	154465 1476808	361112 1863520	542662	738839	25.0 350	50.0 400	100 500	150	200
Toluene	CBNZ d5	Ave	71883 2496911	351840 2540251	692901 3254284	1000479	1332783	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBNZ d5	Ave	14443 781619	79122 850338	170710 1070347	278226	396221	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBNZ d5	Ave	16030 905216	96602 1001550	222171 1271580	352819	483364	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBNZ d5	Ave	14755 523017	67966 569083	138196 718069	209928	283688	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBNZ d5	Ave	13528 498519	67579 486427	126273 683462	184171	244346	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBNZ d5	Ave	26359 969241	127957 1058308	256477 1320887	397870	518120	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBNZ d5	Ave	57842 977068	122936 1109580	278579 1418811	419354	581383	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBNZ d5	Ave	9414 489506	53302 540065	114911 672369	181267	254603	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	13462 550826	67745 607203	142489 773664	223815	294438	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorobenzotrifluoride	CBNZ d5	Ave	25343 874266	109109 869071	222871 1290067	352260	461082	5.00 175	25.0 200	50.0 250	75.0	100

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51

Calibration End Date: 07/27/2017 04:24

Calibration ID: 35038

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	47566 1645967	217561 1704167	431311 2170926	660247	877804	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorobenzotrifluoride	CBNZ d5	Ave	21933 826850	101825 810848	207774 1226371	327327	420704	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	12587 554351	65901 590452	137710 751692	212641	289044	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBNZ d5	Ave	22622 962208	120759 972676	249792 1304914	371119	499116	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBNZ d5	Ave	25553 1197380	151114 1217768	306948 1614353	452043	610286	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBNZ d5	Ave	25240 1130677	138375 1159372	288885 1518391	440285	592117	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBNZ d5	Ave	42810 1866053	242031 1967591	498873 2462559	745860	1002147	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBNZ d5	Ave	6015 310948	30000 350923	67829 443094	112077	157509	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorobenzotrifluoride	CBNZ d5	Ave	21074 840920	107103 875687	216286 1244752	348911	454842	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBNZ d5	Ave	64937 2681266	356966 2665903	726432 3502176	1080505	1415676	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCBd 4	Ave	16032 659984	83376 711710	163748 889999	261052	348475	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBNZ d5	Ave	20749 762601	100341 870164	211912 1078742	316221	412534	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	4170 199800	23168 225821	49334 299994	83561	104361	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCBd 4	Ave	6588 255265	32588 299299	72643 371250	109372	144469	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCBd 4	Ave	17451 786064	95261 774184	198029 1069171	291693	387234	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCBd 4	Ave	14458 666236	83234 700158	167713 907016	256066	344800	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorotoluene	DCBd 4	Ave	16155 680717	87067 742625	185343 1010916	289960	381649	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCBd 4	Ave	48645 2153457	290219 2188229	578518 2828999	866332	1140888	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCBd 4	Ave	16940 719035	88877 738280	180584 970169	269544	369832	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCBd 4	Ave	41329 1844417	236619 1809964	480729 2446270	721573	931884	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCBd 4	Ave	50171 2182090	288545 2260604	588662 2860516	884487	1156912	5.00 175	25.0 200	50.0 250	75.0	100

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3,4-Dichlorobenzotrifluoride	DCBd 4	Ave	15090 525922	64854 542681	138659 801099	219982	277157	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCBd 4	Ave	60251 2514051	336681 2474312	679839 3330508	993968	1298722	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCBd 4	Ave	30355 1146674	151590 1215884	305374 1545747	462404	613101	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCBd 4	Ave	47431 2114911	277710 2107989	570403 2809716	837492	1086140	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCBd 4	Ave	31756 1174377	154714 1249173	315614 1574222	474362	622850	5.00 175	25.0 200	50.0 250	75.0	100
2,4-Dichlorobenzotrifluoride	DCBd 4	Ave	12460 501975	64892 497225	125268 771761	206368	267418	5.00 175	25.0 200	50.0 250	75.0	100
2,5-Dichlorobenzotrifluoride	DCBd 4	Ave	13980 541324	67486 580659	140272 797256	217211	279514	5.00 175	25.0 200	50.0 250	75.0	100
n-Butylbenzene	DCBd 4	Ave	39215 1748217	221777 1729209	454742 2372703	671190	885288	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCBd 4	Ave	30057 1081541	145778 1161072	290492 1435184	437966	577962	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	2690 125814	14158 151695	30986 182290	47827	68470	5.00 175	25.0 200	50.0 250	75.0	100
2,4- & 2,5- & 2,6- Dichlorotoluene	DCBd 4	Ave	47367 2069215	260387 2228710	566788 3049908	889724	1151252	15.0 525	75.0 600	150 750	225	300
2,3- & 3,4- Dichlorotoluene	DCBd 4	Ave	30402 1443949	173187 1589536	380181 2191624	620870	814032	10.0 350	50.0 400	100 500	150	200
1,2,4-Trichlorobenzene	DCBd 4	Ave	12140 511830	60672 552245	134753 755690	200638	266863	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCBd 4	Ave	4721 182711	24054 180140	49048 282046	73984	94134	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCBd 4	Ave	33677 1761559	191971 2008065	465533 2561966	733996	990398	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCBd 4	Ave	11407 453926	57325 497473	117120 693791	184932	247660	5.00 175	25.0 200	50.0 250	75.0	100
2,4,5-Trichlorotoluene	DCBd 4	Ave	5175 235417	23799 253594	53498 ++++	91488	122498	5.00 175	25.0 200	50.0 ++++	75.0	100
2,3,6-Trichlorotoluene	DCBd 4	Ave	4086 211883	23065 237299	53869 ++++	89402	115009	5.00 175	25.0 200	50.0 ++++	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	13893 505019	65453 522323	127700 681339	193042	257355	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	18421 575099	82071 628942	159071 795993	234269	307676	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBNZ d5	Ave	60283 1992609	278432 2000995	541748 2678162	780569	1040595	5.00 175	25.0 200	50.0 250	75.0	100

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8			LVL 6	LVL 7	LVL 8		
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	19227 748217	94618 793129	191158 1033645	289432	390879	5.00 175	25.0 200	50.0 250	75.0	100

Curve Type Legend:

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

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-218218/2	50727D02.D
Level 2	IC 180-218218/3	50727D03.D
Level 3	ICIS 180-218218/4	50727D04.D
Level 4	IC 180-218218/5	50727D05.D
Level 5	IC 180-218218/6	50727D06.D
Level 6	IC 180-218218/10	50727D10.D
Level 7	IC 180-218218/8	50727D08.D
Level 8	IC 180-218218/11	50727D11.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #					LVL 7	LVL 8				
Dichlorodifluoromethane	6.6 -12.7	8.1 -3.0	1.9	0.1	-5.3	4.3	50 30	30	30	30	30	30
Chloromethane	24.5 -11.5	0.4 -8.6	-1.7	1.9	-0.6	-4.5	50 30	30	30	30	30	30
Vinyl chloride	21.8 -13.3	3.6 -3.7	1.6	-4.3	-5.5	-0.2	50 30	30	30	30	30	30
1,3-Butadiene	23.1 -15.3	2.9 -0.4	-1.2	-2.8	-7.0	0.8	50 30	30	30	30	30	30
Bromomethane	-9.1 -8.0	11.9 -11.3	7.5	2.5	11.0	-4.6	50 30	30	30	30	30	30
Chloroethane	21.0 -11.8	7.8 -16.3	-1.5	1.4	1.8	-2.3	50 30	30	30	30	30	30
Trichlorofluoromethane	13.3 -13.2	6.9 -8.1	4.3	-0.3	-1.9	-1.1	50 30	30	30	30	30	30
Ethyl ether	13.5 -4.1	4.4 -14.9	-1.1	2.1	6.3	-6.1	50 30	30	30	30	30	30
Acrolein	-1.6 7.0	-8.5 -7.9	5.3	5.9	5.4	-5.6	50 30	30	30	30	30	30
1,1-Dichloroethene	7.6 -10.9	3.1 0.2	-0.4	0.0	-2.9	3.3	50 30	30	30	30	30	30
1,1,2-Trichloro-1,2,2-trifluoroethane	24.6 -11.3	2.2 -5.2	-2.7	-1.6	-5.7	-0.3	50 30	30	30	30	30	30
Acetone	6.8 -11.0	10.7 -20.6	6.1	11.7	16.2	-19.8	50 30	30	30	30	30	30
Iodomethane	9.6 -3.4	0.4 -5.9	-3.4	1.6	2.2	-1.1	50 30	30	30	30	30	30
Carbon disulfide	6.1 0.5	-8.9 13.7	-7.9	-3.8	0.4	+++++	50 30	30	30	30	30	30
Allyl chloride	-5.1 3.1	-6.1 4.0	-2.6	-1.3	-0.2	8.1	50 30	30	30	30	30	30

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #					LVL 7	LVL 8				
Methyl acetate	11.5	-4.9	1.6	3.8	3.7	-8.7	50	30	30	30	30	30
	0.9	-8.0					30	30				
Methylene Chloride	0.0	-2.5	0.4	5.0	6.0	-2.6	50	30	30	30	30	30
	0.7	-7.2					30	30				
tert-Butyl alcohol	12.8	-2.2	-1.6	-4.3	-4.9	8.8	50	30	30	30	30	30
	-13.1	4.4					30	30				
Acrylonitrile	7.5	-0.7	4.3	4.9	5.9	-12.1	50	30	30	30	30	30
	-1.1	-8.6					30	30				
trans-1,2-Dichloroethene	13.6	-2.1	-2.2	2.2	2.2	0.0	50	30	30	30	30	30
	-8.7	-4.9					30	30				
Methyl tert-butyl ether	-5.3	-2.2	-3.3	5.3	5.8	0.0	50	30	30	30	30	30
	4.3	-4.5					30	30				
Hexane	28.4	0.2	-3.7	-4.4	-9.4	-0.5	50	30	30	30	30	30
	-11.8	1.2					30	30				
1,1-Dichloroethane	7.8	2.7	0.1	0.3	1.2	-1.1	50	30	30	30	30	30
	-4.4	-6.6					30	30				
Vinyl acetate	1.8	-13.3	-7.6	4.0	3.7	1.4	50	30	30	30	30	30
	8.4	1.6					30	30				
2,2-Dichloropropane	12.7	-4.4	-6.6	1.5	2.4	3.6	50	30	30	30	30	30
	-9.5	0.3					30	30				
cis-1,2-Dichloroethene	3.3	0.1	0.3	4.3	4.6	-1.5	50	30	30	30	30	30
	-4.1	-7.1					30	30				
2-Butanone (MEK)	-0.4	5.8	6.9	10.9	10.2	-13.7	50	30	30	30	30	30
	-4.8	-14.9					30	30				
Bromochloromethane	7.0	-0.3	-1.1	2.5	5.4	-3.6	50	30	30	30	30	30
	-1.4	-8.4					30	30				
Tetrahydrofuran	26.5	-9.4	0.4	4.3	-0.5	-14.3	50	30	30	30	30	30
	0.4	-7.4					30	30				
Chloroform	12.9	3.2	-2.7	3.1	2.8	-4.3	50	30	30	30	30	30
	-4.6	-10.3					30	30				
1,1,1-Trichloroethane	3.3	0.3	-0.8	-0.1	0.7	3.7	50	30	30	30	30	30
	-5.5	-1.5					30	30				
Cyclohexane	10.1	2.0	-2.0	-2.2	-5.1	4.9	50	30	30	30	30	30
	-9.2	1.5					30	30				
Carbon tetrachloride	4.3	-2.0	-1.1	0.1	-0.1	4.8	50	30	30	30	30	30
	-5.6	-0.4					30	30				
1,1-Dichloropropene	2.6	3.1	0.7	1.1	-0.8	2.5	50	30	30	30	30	30
	-7.1	-2.1					30	30				
Isobutyl alcohol	-2.6	-8.4	2.0	11.6	12.2	-14.7	50	30	30	30	30	30
	5.2	-5.4					30	30				
Benzene	13.4	3.9	2.0	3.6	3.3	-5.2	50	30	30	30	30	30
	-8.9	-12.1					30	30				

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51

Calibration End Date: 07/27/2017 04:24

Calibration ID: 35038

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #					LVL 7	LVL 8				
1,2-Dichloroethane	9.6	0.3	-0.4	5.9	4.5	-6.3	50	30	30	30	30	30
	-3.5	-10.0					30	30				
n-Heptane	6.1	5.2	-0.1	-3.8	-6.2	3.6	50	30	30	30	30	30
	-10.8	6.0					30	30				
Trichloroethene	5.5	0.9	-0.3	1.4	3.5	-0.8	50	30	30	30	30	30
	-5.8	-4.6					30	30				
Methylcyclohexane	2.2	1.0	1.5	-0.6	-2.9	5.4	50	30	30	30	30	30
	-8.5	1.9					30	30				
1,2-Dichloropropane	6.4	-1.8	-1.7	2.9	5.1	-1.3	50	30	30	30	30	30
	-1.7	-7.7					30	30				
1,4-Dioxane	-25.2	-2.1	6.9	4.5	9.7	-5.7	50	30	30	30	30	30
	5.1	6.9					30	30				
Dibromomethane	-3.8	3.0	-1.3	4.5	6.9	-3.2	50	30	30	30	30	30
	0.5	-6.6					30	30				
Bromodichloromethane	-7.8	-4.0	-2.7	5.6	8.1	2.5	50	30	30	30	30	30
	2.9	-4.5					30	30				
2-Chloroethyl vinyl ether	-18.1	-5.9	-0.3	8.0	10.3	-0.6	50	30	30	30	30	30
	6.8	-0.3					30	30				
cis-1,3-Dichloropropene	-9.1	-9.1	-4.3	4.1	8.7	4.4	50	30	30	30	30	30
	5.1	0.1					30	30				
4-Methyl-2-pentanone (MIBK)	5.7	-2.6	6.0	6.1	8.6	-9.1	50	30	30	30	30	30
	-4.6	-10.1					30	30				
Toluene	22.4	14.1	4.6	0.7	0.8	-7.8	50	30	30	30	30	30
	-15.6	-19.2					30	30				
trans-1,3-Dichloropropene	-9.6	-5.7	-5.3	2.9	10.1	6.1	50	30	30	30	30	30
	3.8	-2.3					30	30				
Ethyl methacrylate	-16.8	-4.5	2.2	8.2	11.4	1.9	50	30	30	30	30	30
	1.4	-3.8					30	30				
1,1,2-Trichloroethane	20.6	5.8	0.2	1.4	3.0	-7.2	50	30	30	30	30	30
	-9.2	-14.4					30	30				
Tetrachloroethene	20.7	14.9	0.0	-2.8	-3.1	-3.4	50	30	30	30	30	30
	-15.3	-11.0					30	30				
1,3-Dichloropropane	16.5	7.8	0.6	4.0	1.7	-7.0	50	30	30	30	30	30
	-8.7	-14.8					30	30				
2-Hexanone	-0.2	1.1	6.6	6.9	11.4	-8.5	50	30	30	30	30	30
	-6.6	-10.7					30	30				
Dibromochloromethane	-9.0	-1.8	-1.5	3.6	9.3	2.7	50	30	30	30	30	30
	1.9	-5.2					30	30				
1,2-Dibromoethane (EDB)	7.3	2.9	0.7	5.4	4.2	-4.8	50	30	30	30	30	30
	-5.6	-10.1					30	30				
3-Chlorobenzotrifluoride	25.2	2.7	-2.4	2.8	1.2	-6.3	50	30	30	30	30	30
	-16.2	-7.1					30	30				

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51

Calibration End Date: 07/27/2017 04:24

Calibration ID: 35038

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #					LVL 7	LVL 8				
Chlorobenzene	24.4	8.4	0.0	2.0	2.0	-6.6	50	30	30	30	30	30
	-13.0	-17.2					30	30				
4-Chlorobenzotrifluoride	17.4	3.9	-1.4	3.6	0.0	-3.9	50	30	30	30	30	30
	-15.3	-4.3					30	30				
1,1,1,2-Tetrachloroethane	3.5	3.3	0.4	3.4	5.6	-1.1	50	30	30	30	30	30
	-5.2	-9.9					30	30				
Ethylbenzene	6.0	7.8	3.8	2.7	3.8	-2.2	50	30	30	30	30	30
	-11.1	-10.9					30	30				
m-Xylene & p-Xylene	-2.1	10.4	4.4	2.4	3.9	-0.4	50	30	30	30	30	30
	-8.9	-9.8					30	30				
o-Xylene	1.5	6.1	3.1	4.7	5.8	-1.3	50	30	30	30	30	30
	-9.0	-10.9					30	30				
Styrene	1.7	9.6	5.2	4.8	5.8	-3.7	50	30	30	30	30	30
	-8.7	-14.6					30	30				
Bromoform	-6.4	-11.1	-6.4	3.0	8.8	5.0	50	30	30	30	30	30
	6.6	0.5					30	30				
2-Chlorobenzotrifluoride	8.8	5.3	-1.0	6.4	4.3	-5.8	50	30	30	30	30	30
	-11.8	-6.3					30	30				
Isopropylbenzene	7.0	12.1	6.2	5.2	3.6	-4.1	50	30	30	30	30	30
	-14.2	-15.8					30	30				
Bromobenzene	2.9	1.7	-3.4	2.8	4.5	0.4	50	30	30	30	30	30
	-3.2	-5.8					30	30				
1,1,2,2-Tetrachloroethane	14.5	5.5	3.7	3.2	1.1	-8.7	50	30	30	30	30	30
	-6.3	-13.2					30	30				
trans-1,4-Dichloro-2-butene	-11.2	-6.3	-3.4	9.2	3.8	0.8	50	30	30	30	30	30
	1.8	5.4					30	30				
1,2,3-Trichloropropane	2.5	-3.7	3.9	4.4	5.0	-5.9	50	30	30	30	30	30
	-1.4	-4.7					30	30				
N-Propylbenzene	-2.0	1.7	2.3	0.6	1.6	4.6	50	30	30	30	30	30
	-7.9	-0.9					30	30				
2-Chlorotoluene	-6.0	2.8	0.2	2.1	4.7	2.6	50	30	30	30	30	30
	-3.6	-2.8					30	30				
3-Chlorotoluene	-3.5	-1.1	1.8	6.3	6.5	-3.6	50	30	30	30	30	30
	-6.0	-0.4					30	30				
1,3,5-Trimethylbenzene	-4.5	8.3	4.4	4.4	4.6	0.2	50	30	30	30	30	30
	-9.0	-8.4					30	30				
4-Chlorotoluene	1.9	1.7	-0.1	-0.4	4.0	2.5	50	30	30	30	30	30
	-5.9	-3.7					30	30				
tert-Butylbenzene	-3.0	5.6	3.8	4.0	2.2	2.6	50	30	30	30	30	30
	-10.0	-5.2					30	30				
1,2,4-Trimethylbenzene	-3.1	5.9	4.5	4.8	4.4	-0.1	50	30	30	30	30	30
	-7.5	-8.9					30	30				



FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: TestAmerica Pittsburgh

Job No.: 180-71467-1

Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51

Calibration End Date: 07/27/2017 04:24

Calibration ID: 35038

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #					LVL 7	LVL 8				
3,4-Dichlorobenzotrifluoride	16.3	-5.0	-1.7	4.1	-0.2	-3.9	50	30	30	30	30	30
	-11.4	1.9					30	30				
sec-Butylbenzene	1.4	7.7	5.2	2.7	2.1	0.3	50	30	30	30	30	30
	-11.8	-7.5					30	30				
1,3-Dichlorobenzene	9.1	3.5	0.9	2.0	2.9	-2.4	50	30	30	30	30	30
	-7.5	-8.4					30	30				
4-Isopropyltoluene	-4.2	6.7	6.0	3.9	2.5	1.3	50	30	30	30	30	30
	-9.8	-6.3					30	30				
1,4-Dichlorobenzene	11.1	2.9	1.5	1.9	1.8	-2.6	50	30	30	30	30	30
	-7.4	-9.1					30	30				
2,4-Dichlorobenzotrifluoride	3.2	2.1	-4.7	4.9	3.4	-1.5	50	30	30	30	30	30
	-12.8	5.4					30	30				
2,5-Dichlorobenzotrifluoride	7.2	-1.7	-1.2	2.2	0.1	-1.7	50	30	30	30	30	30
	-5.7	0.8					30	30				
n-Butylbenzene	-2.8	4.4	3.6	2.1	2.4	2.6	50	30	30	30	30	30
	-9.3	-3.0					30	30				
1,2-Dichlorobenzene	13.3	4.4	0.7	1.3	1.8	-3.4	50	30	30	30	30	30
	-7.3	-10.8					30	30				
1,2-Dibromo-3-Chloropropane	-8.7	-8.6	-3.3	-0.3	8.6	1.2	50	30	30	30	30	30
	9.1	2.1					30	30				
2,4- & 2,5- & 2,6- Dichlorotoluene	-6.2	-2.0	3.2	8.2	6.5	-2.9	50	30	30	30	30	30
	-6.5	-0.3					30	30				
2,3- & 3,4- Dichlorotoluene	-12.6	-5.4	0.4	9.5	9.3	-1.7	50	30	30	30	30	30
	-3.3	3.9					30	30				
1,2,4-Trichlorobenzene	0.0	-5.0	2.0	1.4	2.7	-0.1	50	30	30	30	30	30
	-3.7	2.7					30	30				
Hexachlorobutadiene	6.3	2.9	1.5	2.2	-1.0	-2.5	50	30	30	30	30	30
	-14.1	4.7					30	30				
Naphthalene	-18.6	-11.8	3.5	8.9	11.9	1.0	50	30	30	30	30	30
	2.9	2.2					30	30				
1,2,3-Trichlorobenzene	2.9	-1.8	-2.9	2.3	4.3	-3.0	50	30	30	30	30	30
	-5.0	3.2					30	30				
2,4,5-Trichlorotoluene	-1.8	-14.2	-6.7	6.5	8.5	5.8	50	30	30	30	30	30
	1.9	++++					30	30				
2,3,6-Trichlorotoluene	-16.7	-10.6	1.0	11.9	9.5	2.4	50	30	30	30	30	30
	2.5	++++					30	30				
Dibromofluoromethane (Surr)	6.6	1.1	-1.6	2.9	2.8	-1.7	50	30	30	30	30	30
	-3.3	-6.8					30	30				
1,2-Dichloroethane-d4 (Surr)	15.9	4.0	0.5	2.4	0.8	-8.2	50	30	30	30	30	30
	-4.5	-10.7					30	30				
Toluene-d8 (Surr)	28.6	13.2	2.5	-1.6	-1.4	-7.8	50	30	30	30	30	30
	-16.7	-16.7					30	30				

FORM VI  
 GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
 READBACK PERCENT ERROR

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1 Analy Batch No.: 218218

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/27/2017 00:51 Calibration End Date: 07/27/2017 04:24 Calibration ID: 35038

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #					LVL 7	LVL 8				
4-Bromofluorobenzene (Surr)	13.5	6.5	0.1	1.0	2.5	-4.1	50	30	30	30	30	30
	-8.6	-11.0					30	30				

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D02.D  
 Lims ID: IC VSTD1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 27-Jul-2017 00:51:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-002  
 Misc. Info.: IC VSTD1  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:04:45 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 03:08:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.317	4.323	-0.006	0	246479	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.298	7.298	0.000	99	541701	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.406	10.406	0.000	85	117831	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.773	12.773	0.000	96	160528	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.574	6.574	0.000	90	13893	5.00	5.33	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.951	6.945	0.006	0	18421	5.00	5.79	
\$ 7 Toluene-d8 (Surr)	98	8.946	8.946	0.000	92	60283	5.00	6.43	
\$ 8 4-Bromofluorobenzene (Surr	95	11.599	11.599	0.000	87	19227	5.00	5.68	
11 Dichlorodifluoromethane	85	1.665	1.646	0.018	68	16788	5.00	5.33	
12 Chloromethane	50	1.804	1.804	0.000	97	19706	5.00	6.22	
13 Vinyl chloride	62	1.932	1.944	-0.012	95	19568	5.00	6.09	
14 Butadiene	39	1.963	1.969	-0.005	95	17968	5.00	6.16	
15 Bromomethane	94	2.273	2.254	0.019	90	6901	5.00	4.54	
16 Chloroethane	64	2.419	2.419	0.000	89	10685	5.00	6.05	
17 Dichlorofluoromethane	67	2.699	2.699	0.000	97	26531	5.00	5.94	
18 Trichlorofluoromethane	101	2.760	2.741	0.019	45	22371	5.00	5.67	M
20 Ethyl ether	59	3.076	3.076	0.000	88	14571	5.00	5.67	
21 Acrolein	56	3.252	3.252	0.000	99	63695	100.0	98.4	
22 1,1-Dichloroethene	96	3.368	3.368	0.000	77	14263	5.00	5.38	
23 1,1,2-Trichloro-1,2,2-trif	101	3.441	3.441	0.000	74	18126	5.00	6.23	
24 Acetone	43	3.483	3.477	0.006	99	37823	25.0	26.7	
25 Iodomethane	142	3.569	3.562	0.007	95	22822	5.00	5.48	
26 Carbon disulfide	76	3.654	3.648	0.006	98	30868	5.00	5.30	
28 3-Chloro-1-propene	76	3.940	3.946	-0.006	90	8133	5.00	4.75	
30 Methyl acetate	43	3.970	3.976	-0.006	95	31286	10.0	11.2	
31 Methylene Chloride	84	4.177	4.165	0.012	84	25720	5.00	5.00	
32 2-Methyl-2-propanol	59	4.432	4.451	-0.019	92	16447	50.0	56.4	
33 Acrylonitrile	53	4.554	4.554	0.000	98	73302	50.0	53.7	
34 trans-1,2-Dichloroethene	96	4.591	4.584	0.007	74	17158	5.00	5.68	
35 Methyl tert-butyl ether	73	4.603	4.603	0.000	84	38357	5.00	4.73	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.004	4.998	0.006	89	24902	5.00	6.42	
37 1,1-Dichloroethane	63	5.211	5.217	-0.006	96	28319	5.00	5.39	
38 Vinyl acetate	43	5.272	5.272	0.000	97	27185	5.00	5.09	
44 2,2-Dichloropropane	97	5.947	5.959	-0.012	46	3769	5.00	5.63	
45 cis-1,2-Dichloroethene	96	5.953	5.965	-0.012	79	17858	5.00	5.17	
46 2-Butanone (MEK)	43	5.984	5.978	0.006	98	50216	25.0	24.9	
49 Chlorobromomethane	128	6.245	6.245	0.000	93	8216	5.00	5.35	
51 Tetrahydrofuran	42	6.264	6.263	0.001	93	14858	10.0	12.7	
52 Chloroform	83	6.391	6.391	0.000	91	29608	5.00	5.64	
53 1,1,1-Trichloroethane	97	6.556	6.549	0.007	97	20508	5.00	5.16	
54 Cyclohexane	56	6.616	6.622	-0.006	87	26974	5.00	5.50	
56 Carbon tetrachloride	117	6.726	6.726	0.000	88	17231	5.00	5.21	
55 1,1-Dichloropropene	75	6.738	6.738	0.000	96	22014	5.00	5.13	
57 Isobutyl alcohol	41	6.951	6.945	0.006	43	13122	125.0	121.7	
58 Benzene	78	6.951	6.951	0.000	96	74686	5.00	5.67	
59 1,2-Dichloroethane	62	7.030	7.030	0.000	97	21038	5.00	5.48	
62 n-Heptane	43	7.316	7.316	0.000	56	16453	5.00	5.30	
64 Trichloroethene	130	7.681	7.687	-0.006	95	17490	5.00	5.28	
66 Methylcyclohexane	83	7.918	7.918	0.000	86	25605	5.00	5.11	
67 1,2-Dichloropropane	63	7.955	7.961	-0.006	93	16316	5.00	5.32	
68 Dibromomethane	93	8.046	8.046	0.000	90	8641	5.00	4.81	
70 1,4-Dioxane	88	8.040	8.052	-0.012	5	2333	100.0	74.8	
71 Dichlorobromomethane	83	8.241	8.241	0.000	99	16257	5.00	4.61	
73 2-Chloroethyl vinyl ether	63	8.551	8.545	0.006	92	18086	10.0	8.19	
74 cis-1,3-Dichloropropene	75	8.691	8.685	0.006	95	19479	5.00	4.55	
75 4-Methyl-2-pentanone (MIBK)	43	8.843	8.843	0.000	96	79892	25.0	26.4	
76 Toluene	91	9.019	9.019	0.000	98	71883	5.00	6.12	
77 trans-1,3-Dichloropropene	75	9.263	9.269	-0.006	92	14443	5.00	4.52	
78 Ethyl methacrylate	69	9.330	9.330	0.000	90	16030	5.00	4.16	
79 1,1,2-Trichloroethane	97	9.457	9.457	0.000	89	14755	5.00	6.03	
80 Tetrachloroethene	164	9.530	9.530	0.000	95	13528	5.00	6.04	
81 1,3-Dichloropropane	76	9.616	9.615	0.001	90	26359	5.00	5.83	
82 2-Hexanone	43	9.683	9.682	0.000	98	57842	25.0	25.0	
84 Chlorodibromomethane	129	9.835	9.834	0.001	92	9414	5.00	4.55	
85 Ethylene Dibromide	107	9.944	9.944	0.000	98	13462	5.00	5.36	
86 3-Chlorobenzotrifluoride	180	10.413	10.412	0.001	90	25343	5.00	6.26	
87 Chlorobenzene	112	10.437	10.437	0.000	94	47566	5.00	6.22	
88 4-Chlorobenzotrifluoride	180	10.498	10.498	0.000	96	21933	5.00	5.87	
89 1,1,1,2-Tetrachloroethane	131	10.528	10.528	0.000	88	12587	5.00	5.18	
90 Ethylbenzene	106	10.534	10.534	0.000	98	22622	5.00	5.30	
91 m-Xylene & p-Xylene	106	10.668	10.668	0.000	0	25553	5.00	4.90	
92 o-Xylene	106	11.051	11.051	0.000	95	25240	5.00	5.08	
93 Styrene	104	11.076	11.069	0.007	93	42810	5.00	5.09	
94 Bromoform	173	11.252	11.252	0.000	92	6015	5.00	4.68	
96 2-Chlorobenzotrifluoride	180	11.325	11.325	0.000	96	21074	5.00	5.44	
97 Isopropylbenzene	105	11.422	11.422	0.000	96	64937	5.00	5.35	
100 Bromobenzene	156	11.739	11.739	0.000	93	16032	5.00	5.15	
99 1,1,2,2-Tetrachloroethane	83	11.739	11.745	-0.006	77	20749	5.00	5.73	
102 trans-1,4-Dichloro-2-buten	53	11.787	11.775	0.012	75	4170	5.00	4.44	
101 1,2,3-Trichloropropane	110	11.800	11.793	0.007	85	6588	5.00	5.12	
103 N-Propylbenzene	120	11.842	11.842	0.000	99	17451	5.00	4.90	
104 2-Chlorotoluene	126	11.927	11.927	0.000	96	14458	5.00	4.70	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.994	11.994	0.000	96	16155	5.00	4.83	
106 1,3,5-Trimethylbenzene	105	12.031	12.031	0.000	95	48645	5.00	4.78	
107 4-Chlorotoluene	126	12.061	12.055	0.006	96	16940	5.00	5.10	
108 tert-Butylbenzene	119	12.347	12.347	0.000	93	41329	5.00	4.85	
110 1,2,4-Trimethylbenzene	105	12.408	12.408	0.000	97	50171	5.00	4.84	
111 1,2-dichloro-4-(trifluorom	214	12.457	12.456	0.001	95	15090	5.00	5.82	
112 sec-Butylbenzene	105	12.572	12.572	0.000	94	60251	5.00	5.07	
113 1,3-Dichlorobenzene	146	12.694	12.688	0.006	96	30355	5.00	5.45	
114 4-Isopropyltoluene	119	12.736	12.730	0.006	97	47431	5.00	4.79	
115 1,4-Dichlorobenzene	146	12.797	12.797	0.000	95	31756	5.00	5.56	
116 2,4-Dichloro-1-(trifluorom	214	12.840	12.828	0.012	94	12460	5.00	5.16	
118 2,5-Dichlorobenzotrifluori	214	12.882	12.870	0.012	0	13980	5.00	5.36	
120 n-Butylbenzene	91	13.156	13.150	0.006	96	39215	5.00	4.86	
121 1,2-Dichlorobenzene	146	13.162	13.156	0.006	85	30057	5.00	5.66	
122 1,2-Dibromo-3-Chloropropan	75	13.977	13.971	0.006	81	2690	5.00	4.57	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.130	14.117	0.013	0	47367	15.0	14.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.561	14.555	0.006	0	30402	10.0	8.74	
126 1,2,4-Trichlorobenzene	180	14.847	14.829	0.018	92	12140	5.00	5.00	
127 Hexachlorobutadiene	225	15.012	14.993	0.019	91	4721	5.00	5.31	
128 Naphthalene	128	15.127	15.103	0.024	96	33677	5.00	4.07	
129 1,2,3-Trichlorobenzene	180	15.371	15.346	0.025	95	11407	5.00	5.14	
131 2,4,5-Trichlorotoluene	159	16.240	16.198	0.042	0	5175	5.00	4.91	
130 2,3,6-Trichlorotoluene	159	16.338	16.307	0.031	88	4086	5.00	4.17	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		10.0	9.97	
S 134 1,2-Dichloroethene, Total	96				0		10.0	10.8	
S 135 1,3-Dichloropropene, Total	1				0		10.0	9.06	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260SURR_00071	Amount Added: 0.20	Units: uL
VOA8260VOAPRI_00263	Amount Added: 0.20	Units: uL
voaWAcro1stRe_00016	Amount Added: 4.00	Units: uL
voaWVA1stRest_00017	Amount Added: 0.20	Units: uL
voaWEEmix1stR_00009	Amount Added: 0.20	Units: uL
voaW2clev1stR_00013	Amount Added: 0.20	Units: uL
voaWKetmix1st_00004	Amount Added: 0.80	Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D02.D

Injection Date: 27-Jul-2017 00:51:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: IC VSTD1

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

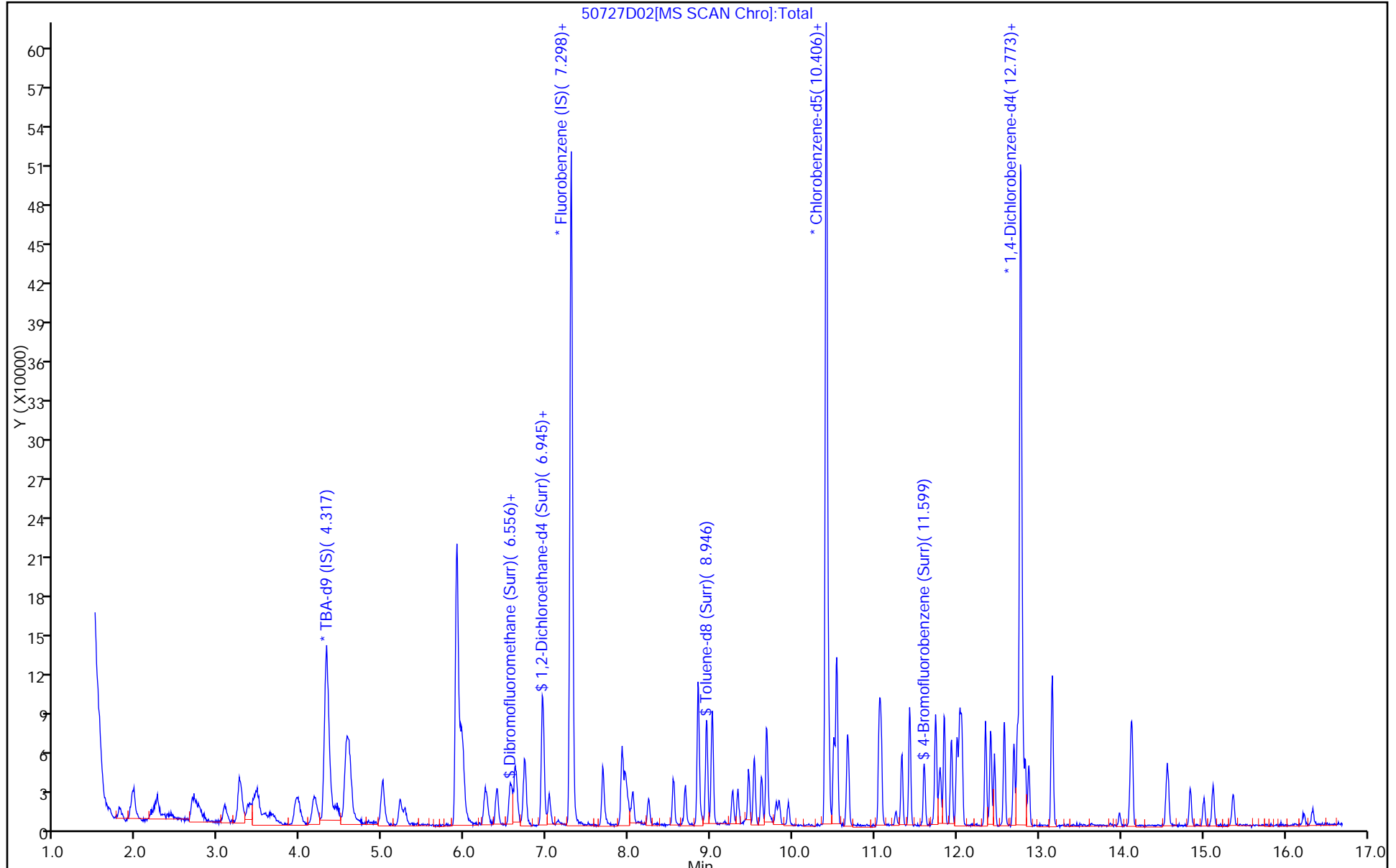
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

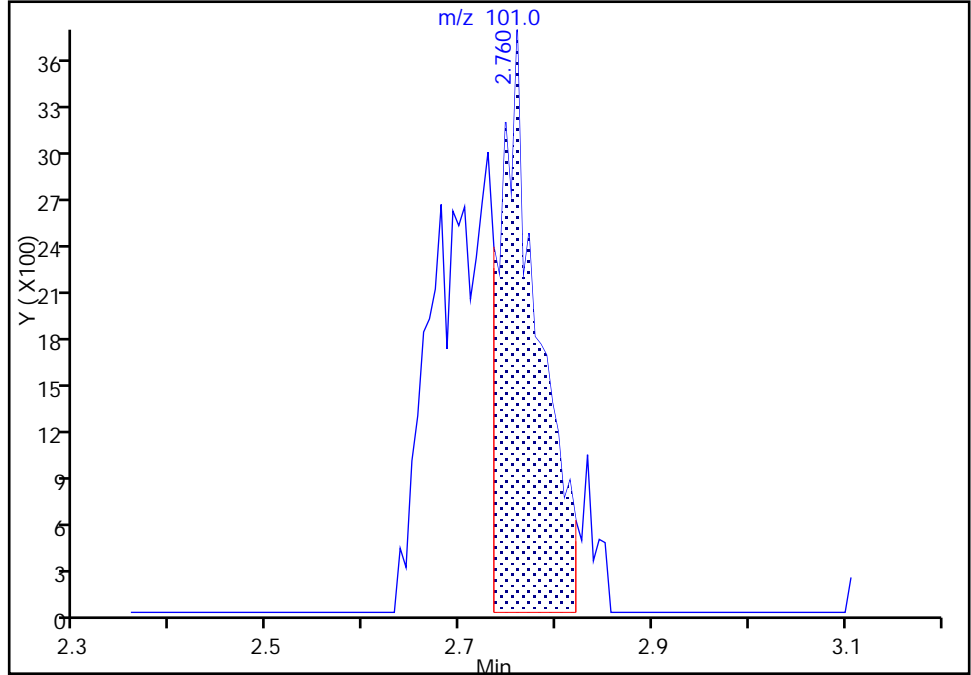
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D02.D  
Injection Date: 27-Jul-2017 00:51:30 Instrument ID: CHHP5  
Lims ID: IC VSTD1  
Client ID:  
Operator ID: 034635 ALS Bottle#: 2 Worklist Smp#: 2  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

18 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

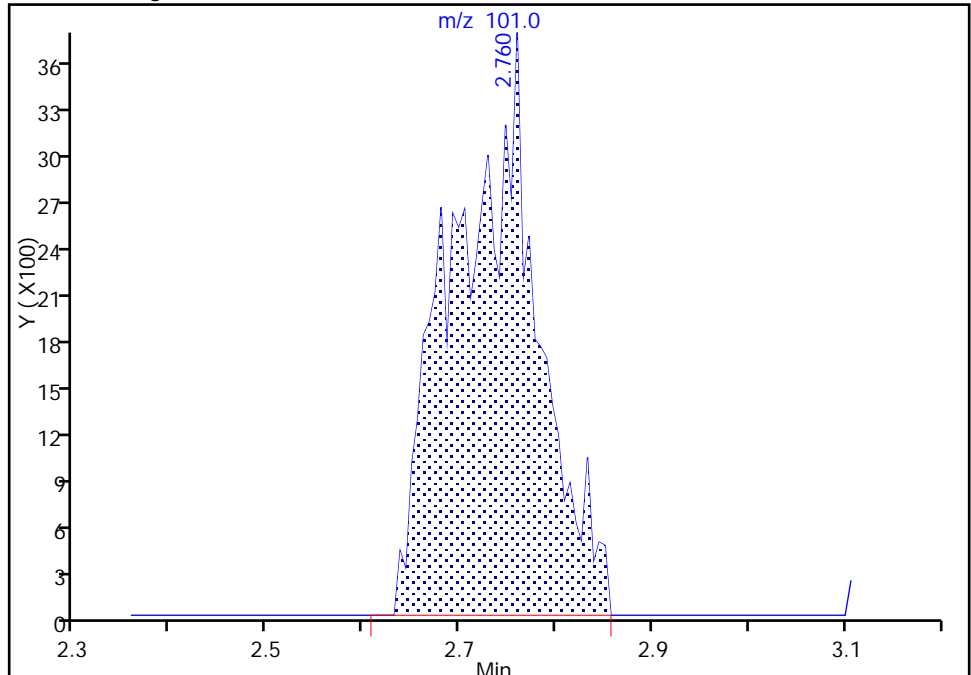
RT: 2.76  
Area: 10302  
Amount: 3.465076  
Amount Units: ng

Processing Integration Results



RT: 2.76  
Area: 22371  
Amount: 5.667373  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 27-Jul-2017 03:06:53  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D03.D  
 Lims ID: IC VSTD5  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 27-Jul-2017 01:15:30 ALS Bottle#: 3 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-003  
 Misc. Info.: IC VSTD5  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:04:47 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 03:14:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.319	4.323	-0.004	0	223811	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.299	7.298	0.001	98	538128	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.408	10.406	0.002	85	123664	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.775	12.773	0.002	94	168910	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.576	6.574	0.002	94	65453	25.0	25.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.947	6.945	0.002	0	82071	25.0	26.0	
\$ 7 Toluene-d8 (Surr)	98	8.948	8.946	0.002	92	278432	25.0	28.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.600	11.599	0.001	87	94618	25.0	26.6	
11 Dichlorodifluoromethane	85	1.648	1.646	0.002	100	84559	25.0	27.0	
12 Chloromethane	50	1.794	1.804	-0.010	99	78965	25.0	25.1	
13 Vinyl chloride	62	1.946	1.944	0.002	98	82670	25.0	25.9	
14 Butadiene	39	1.964	1.969	-0.004	92	74553	25.0	25.7	
15 Bromomethane	94	2.262	2.254	0.008	91	42224	25.0	28.0	
16 Chloroethane	64	2.421	2.419	0.001	98	47273	25.0	26.9	
17 Dichlorofluoromethane	67	2.700	2.699	0.001	97	119855	25.0	27.0	
18 Trichlorofluoromethane	101	2.749	2.741	0.008	94	104824	25.0	26.7	M
20 Ethyl ether	59	3.084	3.076	0.008	87	66542	25.0	26.1	
21 Acrolein	56	3.266	3.252	0.014	98	73476	125.0	114.3	
22 1,1-Dichloroethene	96	3.376	3.368	0.008	96	67928	25.0	25.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.436	3.441	-0.005	93	73846	25.0	25.5	
24 Acetone	43	3.479	3.477	0.002	96	77890	50.0	55.3	
25 Iodomethane	142	3.570	3.562	0.008	98	103869	25.0	25.1	
26 Carbon disulfide	76	3.649	3.648	0.001	99	131730	25.0	22.8	
28 3-Chloro-1-propene	76	3.954	3.946	0.008	92	39946	25.0	23.5	
30 Methyl acetate	43	3.978	3.976	0.002	97	132543	50.0	47.6	
31 Methylene Chloride	84	4.166	4.165	0.001	88	84822	25.0	24.4	
32 2-Methyl-2-propanol	59	4.446	4.451	-0.005	92	64738	250.0	244.6	
33 Acrylonitrile	53	4.562	4.554	0.008	100	336508	250.0	248.3	
34 trans-1,2-Dichloroethene	96	4.580	4.584	-0.004	98	73445	25.0	24.5	
35 Methyl tert-butyl ether	73	4.604	4.603	0.001	96	196780	25.0	24.4	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.006	4.998	0.008	92	96542	25.0	25.1	
37 1,1-Dichloroethane	63	5.219	5.217	0.002	96	133976	25.0	25.7	
38 Vinyl acetate	43	5.268	5.272	-0.004	97	115000	25.0	21.7	
44 2,2-Dichloropropane	97	5.961	5.959	0.002	57	15889	25.0	23.9	
45 cis-1,2-Dichloroethene	96	5.961	5.965	-0.004	81	85931	25.0	25.0	
46 2-Butanone (MEK)	43	5.985	5.978	0.007	93	105960	50.0	52.9	
49 Chlorobromomethane	128	6.253	6.245	0.008	94	38047	25.0	24.9	
51 Tetrahydrofuran	42	6.271	6.263	0.008	86	52866	50.0	45.3	
52 Chloroform	83	6.393	6.391	0.002	93	134431	25.0	25.8	
53 1,1,1-Trichloroethane	97	6.557	6.549	0.008	98	98927	25.0	25.1	
54 Cyclohexane	56	6.618	6.622	-0.004	89	124196	25.0	25.5	
56 Carbon tetrachloride	117	6.722	6.726	-0.004	95	80446	25.0	24.5	
55 1,1-Dichloropropene	75	6.746	6.738	0.008	98	109851	25.0	25.8	
57 Isobutyl alcohol	41	6.947	6.945	0.002	82	61305	625.0	572.5	
58 Benzene	78	6.953	6.951	0.002	97	339765	25.0	26.0	
59 1,2-Dichloroethane	62	7.032	7.030	0.002	97	95627	25.0	25.1	
62 n-Heptane	43	7.318	7.316	0.002	90	81002	25.0	26.3	
64 Trichloroethene	130	7.689	7.687	0.002	98	83072	25.0	25.2	
66 Methylcyclohexane	83	7.920	7.918	0.002	86	125697	25.0	25.2	
67 1,2-Dichloropropane	63	7.963	7.961	0.002	94	74777	25.0	24.5	
68 Dibromomethane	93	8.048	8.046	0.002	95	45949	25.0	25.7	
70 1,4-Dioxane	88	8.048	8.052	-0.004	38	15162	500.0	489.4	M
71 Dichlorobromomethane	83	8.242	8.241	0.001	98	84070	25.0	24.0	
73 2-Chloroethyl vinyl ether	63	8.547	8.545	0.002	95	103158	50.0	47.0	
74 cis-1,3-Dichloropropene	75	8.686	8.685	0.001	96	96744	25.0	22.7	
75 4-Methyl-2-pentanone (MIBK)	43	8.845	8.843	0.002	95	154465	50.0	48.7	
76 Toluene	91	9.015	9.019	-0.004	98	351840	25.0	28.5	
77 trans-1,3-Dichloropropene	75	9.270	9.269	0.001	92	79122	25.0	23.6	
78 Ethyl methacrylate	69	9.325	9.330	-0.005	88	96602	25.0	23.9	
79 1,1,2-Trichloroethane	97	9.465	9.457	0.008	90	67966	25.0	26.5	
80 Tetrachloroethene	164	9.532	9.530	0.002	97	67579	25.0	28.7	
81 1,3-Dichloropropane	76	9.617	9.615	0.002	89	127957	25.0	26.9	
82 2-Hexanone	43	9.678	9.682	-0.004	95	122936	50.0	50.5	
84 Chlorodibromomethane	129	9.836	9.834	0.002	89	53302	25.0	24.5	
85 Ethylene Dibromide	107	9.946	9.944	0.002	100	67745	25.0	25.7	
86 3-Chlorobenzotrifluoride	180	10.408	10.412	-0.004	95	109109	25.0	25.7	
87 Chlorobenzene	112	10.432	10.437	-0.005	95	217561	25.0	27.1	
88 4-Chlorobenzotrifluoride	180	10.499	10.498	0.001	95	101825	25.0	26.0	
89 1,1,1,2-Tetrachloroethane	131	10.530	10.528	0.002	92	65901	25.0	25.8	
90 Ethylbenzene	106	10.536	10.534	0.002	98	120759	25.0	26.9	
91 m-Xylene & p-Xylene	106	10.670	10.668	0.002	0	151114	25.0	27.6	
92 o-Xylene	106	11.053	11.051	0.002	96	138375	25.0	26.5	
93 Styrene	104	11.071	11.069	0.002	95	242031	25.0	27.4	
94 Bromoform	173	11.254	11.252	0.002	97	30000	25.0	22.2	
96 2-Chlorobenzotrifluoride	180	11.327	11.325	0.002	97	107103	25.0	26.3	
97 Isopropylbenzene	105	11.424	11.422	0.002	96	356966	25.0	28.0	
100 Bromobenzene	156	11.734	11.739	-0.005	95	83376	25.0	25.4	
99 1,1,2,2-Tetrachloroethane	83	11.740	11.745	-0.005	94	100341	25.0	26.4	
102 trans-1,4-Dichloro-2-buten	53	11.777	11.775	0.002	77	23168	25.0	23.4	
101 1,2,3-Trichloropropane	110	11.789	11.793	-0.004	86	32588	25.0	24.1	
103 N-Propylbenzene	120	11.838	11.842	-0.004	99	95261	25.0	25.4	
104 2-Chlorotoluene	126	11.929	11.927	0.002	96	83234	25.0	25.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.996	11.994	0.002	96	87067	25.0	24.7	
106 1,3,5-Trimethylbenzene	105	12.026	12.031	-0.005	95	290219	25.0	27.1	
107 4-Chlorotoluene	126	12.057	12.055	0.002	96	88877	25.0	25.4	
108 tert-Butylbenzene	119	12.349	12.347	0.002	93	236619	25.0	26.4	
110 1,2,4-Trimethylbenzene	105	12.410	12.408	0.002	97	288545	25.0	26.5	
111 1,2-dichloro-4-(trifluorom	214	12.452	12.456	-0.004	96	64854	25.0	23.8	
112 sec-Butylbenzene	105	12.574	12.572	0.002	94	336681	25.0	26.9	
113 1,3-Dichlorobenzene	146	12.689	12.688	0.001	97	151590	25.0	25.9	
114 4-Isopropyltoluene	119	12.732	12.730	0.002	97	277710	25.0	26.7	
115 1,4-Dichlorobenzene	146	12.799	12.797	0.002	95	154714	25.0	25.7	
116 2,4-Dichloro-1-(trifluorom	214	12.829	12.828	0.001	96	64892	25.0	25.5	
118 2,5-Dichlorobenzotrifluori	214	12.872	12.870	0.002	0	67486	25.0	24.6	
120 n-Butylbenzene	91	13.152	13.150	0.002	98	221777	25.0	26.1	
121 1,2-Dichlorobenzene	146	13.158	13.156	0.002	98	145778	25.0	26.1	
122 1,2-Dibromo-3-Chloropropan	75	13.973	13.971	0.002	83	14158	25.0	22.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.119	14.117	0.002	0	260387	75.0	73.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.557	14.555	0.002	0	173187	50.0	47.3	
126 1,2,4-Trichlorobenzene	180	14.837	14.829	0.008	94	60672	25.0	23.7	
127 Hexachlorobutadiene	225	14.995	14.993	0.002	98	24054	25.0	25.7	
128 Naphthalene	128	15.111	15.103	0.008	97	191971	25.0	22.1	
129 1,2,3-Trichlorobenzene	180	15.348	15.346	0.002	95	57325	25.0	24.6	
131 2,4,5-Trichlorotoluene	159	16.200	16.198	0.002	0	23799	25.0	21.5	
130 2,3,6-Trichlorotoluene	159	16.309	16.307	0.002	95	23065	25.0	22.3	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		50.0	49.5	
S 133 Xylenes, Total	106				0		50.0	54.1	
S 135 1,3-Dichloropropene, Total	1				0		50.0	46.3	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOA8260VOAPRI_00263	Amount Added: 1.00	Units: uL
voaW2clev1stR_00013	Amount Added: 1.00	Units: uL
voaWAcro1stRe_00016	Amount Added: 5.00	Units: uL
voaWVA1stRest_00017	Amount Added: 1.00	Units: uL
voaWEEmix1stR_00009	Amount Added: 1.00	Units: uL
VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260SURR_00071	Amount Added: 1.00	Units: uL
voaWKetmix1st_00004	Amount Added: 1.00	Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D03.D

Injection Date: 27-Jul-2017 01:15:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: IC VSTD5

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

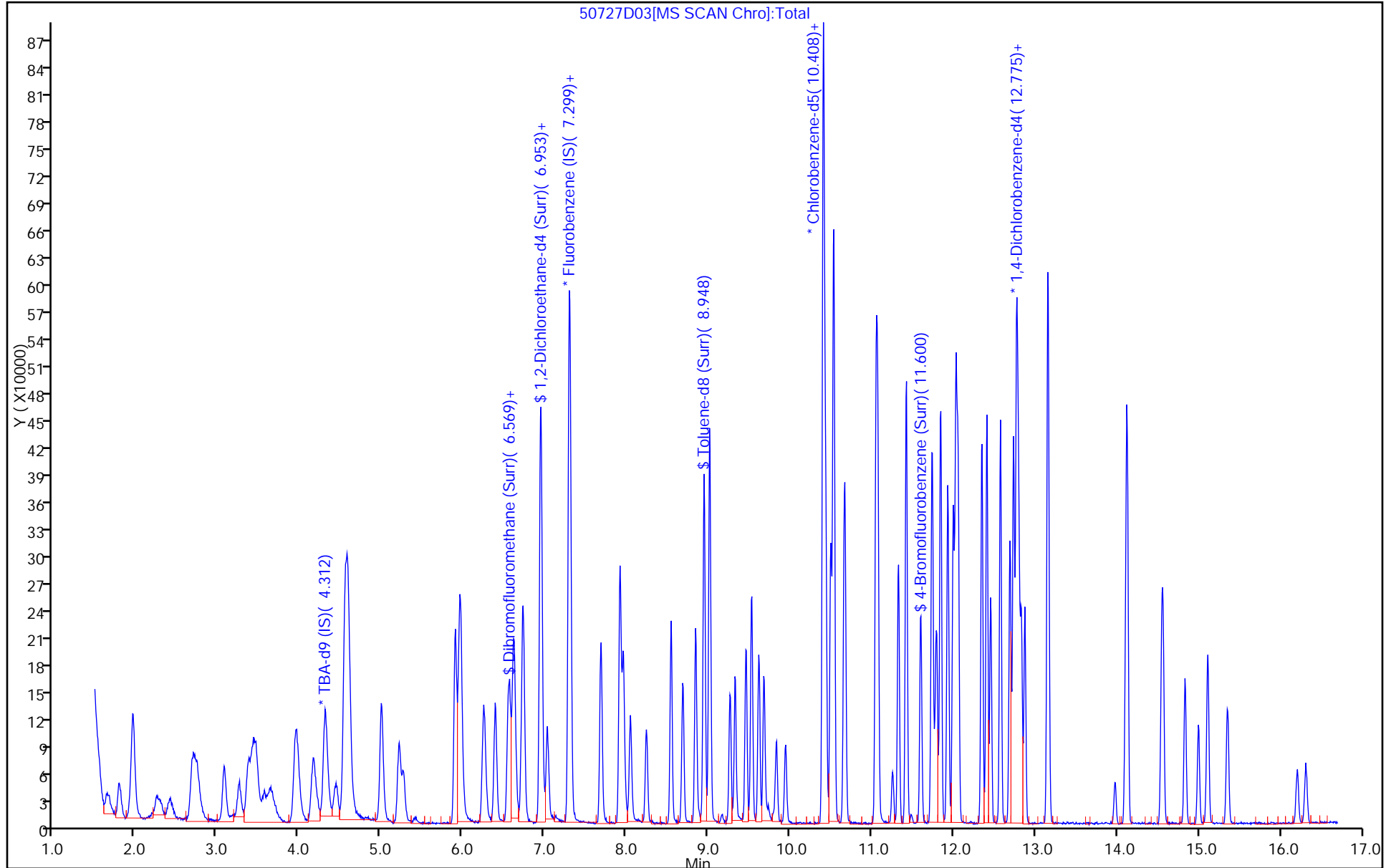
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

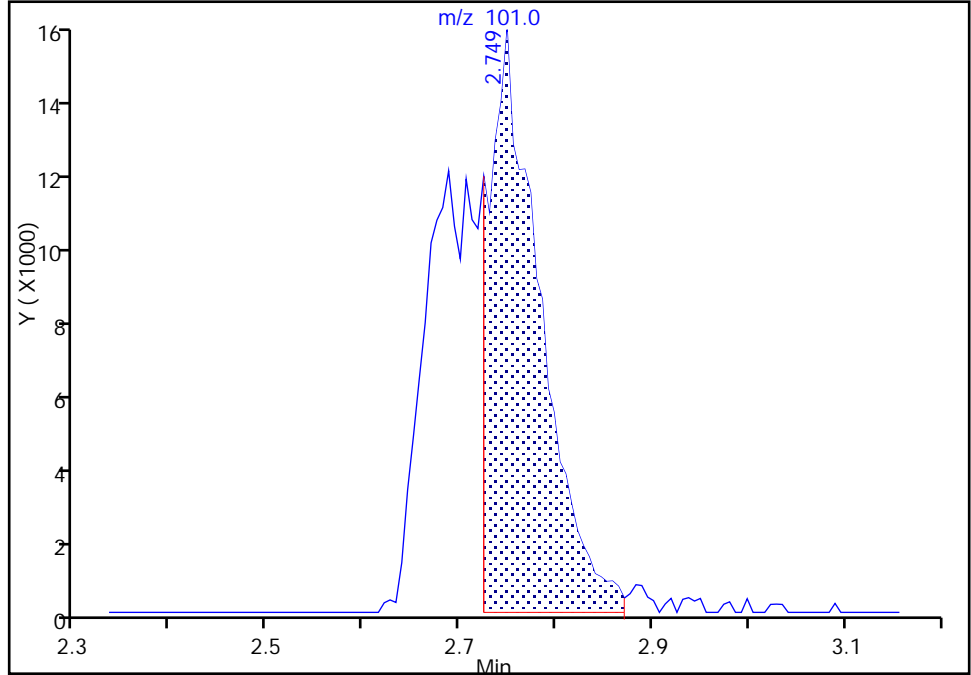
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Injection Date: 27-Jul-2017 01:15:30 Instrument ID: CHHP5  
Lims ID: IC VSTD5  
Client ID:  
Operator ID: 034635 ALS Bottle#: 3 Worklist Smp#: 3  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

18 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

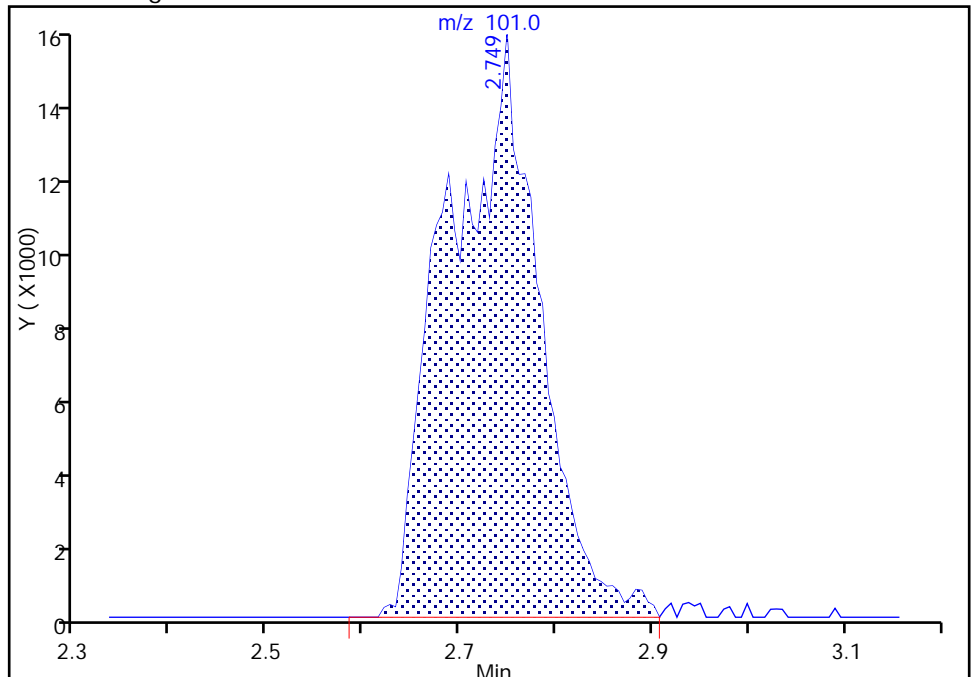
RT: 2.75  
Area: 59636  
Amount: 17.371088  
Amount Units: ng

Processing Integration Results



RT: 2.75  
Area: 104824  
Amount: 26.731985  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 27-Jul-2017 03:13:52  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Pittsburgh

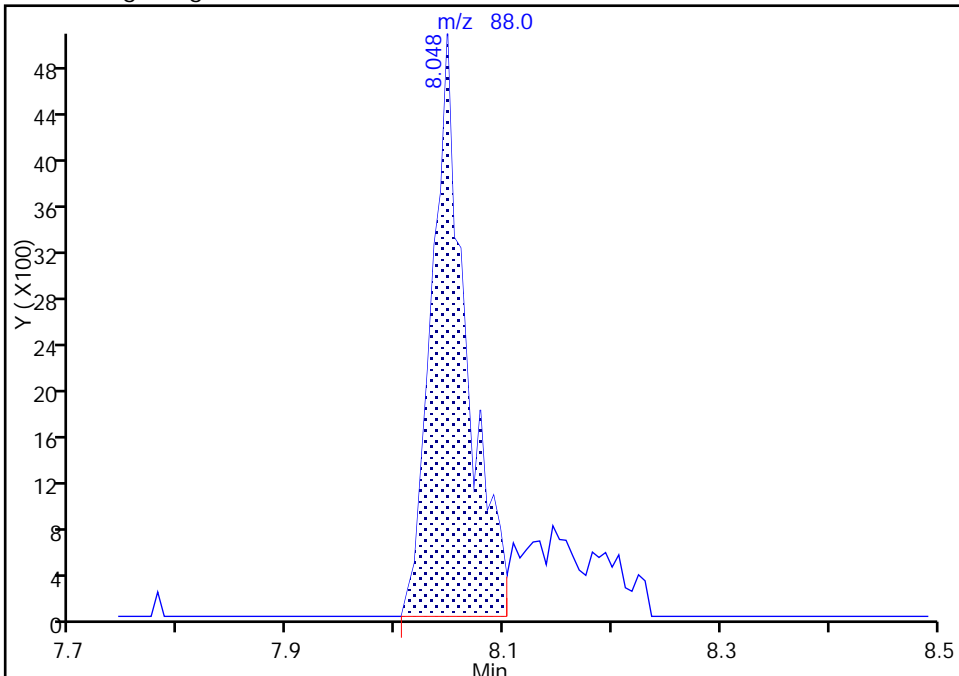
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D03.D  
Injection Date: 27-Jul-2017 01:15:30 Instrument ID: CHHP5  
Lims ID: IC VSTD5  
Client ID:  
Operator ID: 034635 ALS Bottle#: 3 Worklist Smp#: 3  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

Signal: 1

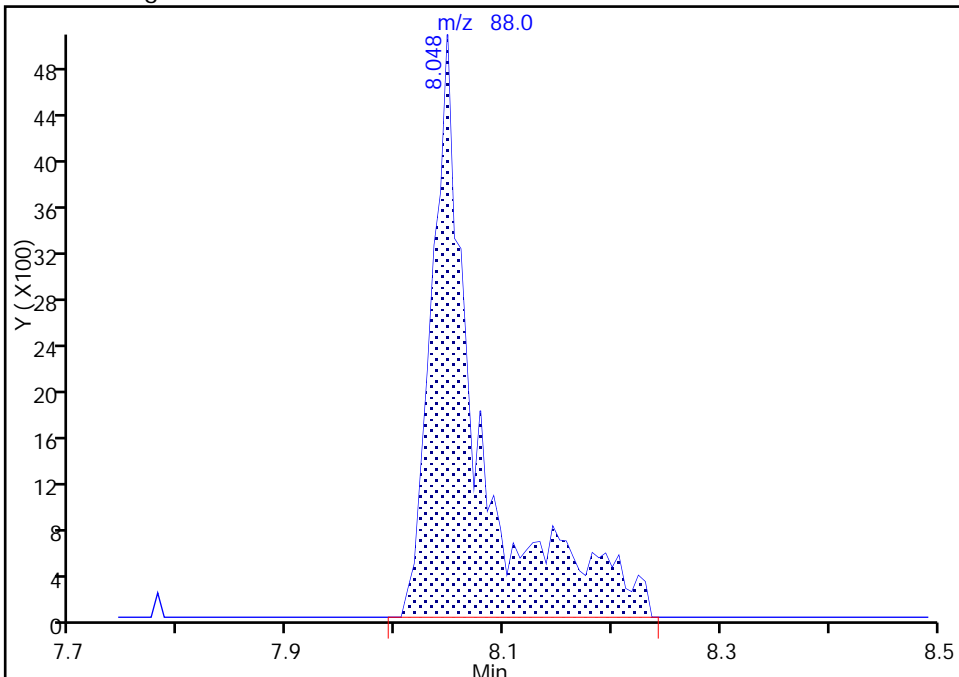
RT: 8.05  
Area: 11273  
Amount: 403.3803  
Amount Units: ng

Processing Integration Results



RT: 8.05  
Area: 15162  
Amount: 489.3788  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 27-Jul-2017 03:14:22  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D04.D  
 Lims ID: ICIS VSTD10  
 Client ID:  
 Sample Type: ICIS Calib Level: 3  
 Inject. Date: 27-Jul-2017 01:39:30 ALS Bottle#: 4 Worklist Smp#: 4  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-004  
 Misc. Info.: ICIS VSTD10  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:04:50 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 03:16:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.328	4.328	0.000	0	240414	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.297	7.297	0.000	99	539679	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.405	10.405	0.000	86	132843	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.772	12.772	0.000	94	174621	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.573	6.573	0.000	94	127700	50.0	49.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.944	6.944	0.000	0	159071	50.0	50.2	
\$ 7 Toluene-d8 (Surr)	98	8.951	8.951	0.000	92	541748	50.0	51.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.598	11.598	0.000	87	191158	50.0	50.1	
11 Dichlorodifluoromethane	85	1.663	1.663	0.000	99	159957	50.0	51.0	
12 Chloromethane	50	1.797	1.797	0.000	99	154943	50.0	49.1	
13 Vinyl chloride	62	1.955	1.955	0.000	98	162634	50.0	50.8	
14 Butadiene	39	1.968	1.968	0.000	94	143576	50.0	49.4	
15 Bromomethane	94	2.272	2.272	0.000	89	81346	50.0	53.8	
16 Chloroethane	64	2.424	2.424	0.000	98	86601	50.0	49.2	
17 Dichlorofluoromethane	67	2.710	2.710	0.000	96	224450	50.0	50.4	
18 Trichlorofluoromethane	101	2.746	2.746	0.000	97	205127	50.0	52.2	M
20 Ethyl ether	59	3.087	3.087	0.000	89	126496	50.0	49.4	
21 Acrolein	56	3.269	3.269	0.000	99	101829	150.0	158.0	
22 1,1-Dichloroethene	96	3.373	3.373	0.000	83	131576	50.0	49.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.440	3.440	0.000	91	141127	50.0	48.7	
24 Acetone	43	3.482	3.482	0.000	100	149782	100.0	106.1	
25 Iodomethane	142	3.580	3.580	0.000	99	200342	50.0	48.3	
26 Carbon disulfide	76	3.659	3.659	0.000	98	266935	50.0	46.0	
28 3-Chloro-1-propene	76	3.951	3.951	0.000	92	83167	50.0	48.7	
30 Methyl acetate	43	3.975	3.975	0.000	97	283974	100.0	101.6	
31 Methylene Chloride	84	4.170	4.170	0.000	90	164284	50.0	50.2	
32 2-Methyl-2-propanol	59	4.450	4.450	0.000	93	139891	500.0	492.0	
33 Acrylonitrile	53	4.559	4.559	0.000	99	708552	500.0	521.4	
34 trans-1,2-Dichloroethene	96	4.584	4.584	0.000	97	147191	50.0	48.9	
35 Methyl tert-butyl ether	73	4.608	4.608	0.000	96	390184	50.0	48.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.003	5.003	0.000	93	186124	50.0	48.2	
37 1,1-Dichloroethane	63	5.222	5.222	0.000	96	261874	50.0	50.0	
38 Vinyl acetate	43	5.271	5.271	0.000	97	245879	50.0	46.2	
44 2,2-Dichloropropane	97	5.958	5.958	0.000	72	31118	50.0	46.7	
45 cis-1,2-Dichloroethene	96	5.971	5.971	0.000	79	172690	50.0	50.2	
46 2-Butanone (MEK)	43	5.977	5.977	0.000	98	214731	100.0	106.9	
49 Chlorobromomethane	128	6.250	6.250	0.000	95	75687	50.0	49.5	
51 Tetrahydrofuran	42	6.269	6.269	0.000	89	117485	100.0	100.4	
52 Chloroform	83	6.396	6.396	0.000	92	254354	50.0	48.7	
53 1,1,1-Trichloroethane	97	6.555	6.555	0.000	98	196286	50.0	49.6	
54 Cyclohexane	56	6.621	6.621	0.000	89	239333	50.0	49.0	
56 Carbon tetrachloride	117	6.719	6.719	0.000	97	162849	50.0	49.5	
55 1,1-Dichloropropene	75	6.743	6.743	0.000	97	215336	50.0	50.4	
57 Isobutyl alcohol	41	6.950	6.950	0.000	84	136973	1250.0	1275.5	
58 Benzene	78	6.950	6.950	0.000	97	669098	50.0	51.0	
59 1,2-Dichloroethane	62	7.035	7.035	0.000	97	190422	50.0	49.8	
62 n-Heptane	43	7.315	7.315	0.000	86	154370	50.0	50.0	
64 Trichloroethene	130	7.692	7.692	0.000	98	164695	50.0	49.9	
66 Methylcyclohexane	83	7.917	7.917	0.000	86	253511	50.0	50.8	
67 1,2-Dichloropropane	63	7.960	7.960	0.000	94	150135	50.0	49.1	
68 Dibromomethane	93	8.045	8.045	0.000	95	88395	50.0	49.4	
70 1,4-Dioxane	88	8.051	8.051	0.000	40	33209	1000.0	1068.8	M
71 Dichlorobromomethane	83	8.246	8.246	0.000	99	171049	50.0	48.7	
73 2-Chloroethyl vinyl ether	63	8.544	8.544	0.000	92	219328	100.0	99.7	
74 cis-1,3-Dichloropropene	75	8.690	8.690	0.000	95	204344	50.0	47.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.848	8.848	0.000	96	361112	100.0	106.0	
76 Toluene	91	9.018	9.018	0.000	99	692901	50.0	52.3	
77 trans-1,3-Dichloropropene	75	9.268	9.268	0.000	93	170710	50.0	47.4	
78 Ethyl methacrylate	69	9.329	9.329	0.000	88	222171	50.0	51.1	
79 1,1,2-Trichloroethane	97	9.456	9.456	0.000	90	138196	50.0	50.1	
80 Tetrachloroethene	164	9.535	9.535	0.000	97	126273	50.0	50.0	
81 1,3-Dichloropropane	76	9.621	9.621	0.000	89	256477	50.0	50.3	
82 2-Hexanone	43	9.681	9.681	0.000	94	278579	100.0	106.6	
84 Chlorodibromomethane	129	9.834	9.834	0.000	90	114911	50.0	49.3	
85 Ethylene Dibromide	107	9.943	9.943	0.000	98	142489	50.0	50.3	
86 3-Chlorobenzotrifluoride	180	10.411	10.411	0.000	93	222871	50.0	48.8	
87 Chlorobenzene	112	10.436	10.436	0.000	95	431311	50.0	50.0	
88 4-Chlorobenzotrifluoride	180	10.497	10.497	0.000	96	207774	50.0	49.3	
89 1,1,1,2-Tetrachloroethane	131	10.533	10.533	0.000	94	137710	50.0	50.2	
90 Ethylbenzene	106	10.533	10.533	0.000	98	249792	50.0	51.9	
91 m-Xylene & p-Xylene	106	10.667	10.667	0.000	0	306948	50.0	52.2	
92 o-Xylene	106	11.050	11.050	0.000	96	288885	50.0	51.5	
93 Styrene	104	11.068	11.068	0.000	95	498873	50.0	52.6	
94 Bromoform	173	11.257	11.257	0.000	96	67829	50.0	46.8	
96 2-Chlorobenzotrifluoride	180	11.324	11.324	0.000	97	216286	50.0	49.5	
97 Isopropylbenzene	105	11.421	11.421	0.000	95	726432	50.0	53.1	
100 Bromobenzene	156	11.738	11.738	0.000	94	163748	50.0	48.3	
99 1,1,2,2-Tetrachloroethane	83	11.738	11.738	0.000	95	211912	50.0	51.9	
102 trans-1,4-Dichloro-2-buten	53	11.780	11.780	0.000	83	49334	50.0	48.3	
101 1,2,3-Trichloropropane	110	11.792	11.792	0.000	85	72643	50.0	51.9	
103 N-Propylbenzene	120	11.841	11.841	0.000	98	198029	50.0	51.1	
104 2-Chlorotoluene	126	11.926	11.926	0.000	97	167713	50.0	50.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.999	11.999	0.000	96	185343	50.0	50.9	
106 1,3,5-Trimethylbenzene	105	12.030	12.030	0.000	94	578518	50.0	52.2	
107 4-Chlorotoluene	126	12.054	12.054	0.000	96	180584	50.0	50.0	
108 tert-Butylbenzene	119	12.346	12.346	0.000	93	480729	50.0	51.9	
110 1,2,4-Trimethylbenzene	105	12.407	12.407	0.000	97	588662	50.0	52.3	
111 1,2-dichloro-4-(trifluorom	214	12.456	12.456	0.000	97	138659	50.0	49.1	
112 sec-Butylbenzene	105	12.571	12.571	0.000	94	679839	50.0	52.6	
113 1,3-Dichlorobenzene	146	12.687	12.687	0.000	97	305374	50.0	50.4	
114 4-Isopropyltoluene	119	12.735	12.735	0.000	97	570403	50.0	53.0	
115 1,4-Dichlorobenzene	146	12.796	12.796	0.000	95	315614	50.0	50.8	
116 2,4-Dichloro-1-(trifluorom	214	12.827	12.827	0.000	95	125268	50.0	47.7	
118 2,5-Dichlorobenzotrifluori	214	12.875	12.875	0.000	0	140272	50.0	49.4	
120 n-Butylbenzene	91	13.149	13.149	0.000	98	454742	50.0	51.8	
121 1,2-Dichlorobenzene	146	13.161	13.161	0.000	98	290492	50.0	50.3	
122 1,2-Dibromo-3-Chloropropan	75	13.976	13.976	0.000	85	30986	50.0	48.4	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.122	14.122	0.000	0	566788	150.0	154.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.554	14.554	0.000	0	380181	100.0	100.4	
126 1,2,4-Trichlorobenzene	180	14.834	14.834	0.000	93	134753	50.0	51.0	
127 Hexachlorobutadiene	225	14.992	14.992	0.000	97	49048	50.0	50.8	
128 Naphthalene	128	15.108	15.108	0.000	97	465533	50.0	51.7	
129 1,2,3-Trichlorobenzene	180	15.351	15.351	0.000	95	117120	50.0	48.5	
131 2,4,5-Trichlorotoluene	159	16.203	16.203	0.000	0	53498	50.0	46.6	
130 2,3,6-Trichlorotoluene	159	16.312	16.312	0.000	97	53869	50.0	50.5	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	103.7	
S 134 1,2-Dichloroethene, Total	96				0		100.0	99.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	95.2	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260SURR_00071	Amount Added: 2.00	Units: uL
VOA8260VOAPRI_00263	Amount Added: 2.00	Units: uL
voaW2clev1stR_00013	Amount Added: 2.00	Units: uL
voaWAcro1stRe_00016	Amount Added: 6.00	Units: uL
voaWVA1stRest_00017	Amount Added: 2.00	Units: uL
voaWEEmix1stR_00009	Amount Added: 2.00	Units: uL
voaWKetmix1st_00004	Amount Added: 2.00	Units: uL



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D04.D

Injection Date: 27-Jul-2017 01:39:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: ICIS VSTD10

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

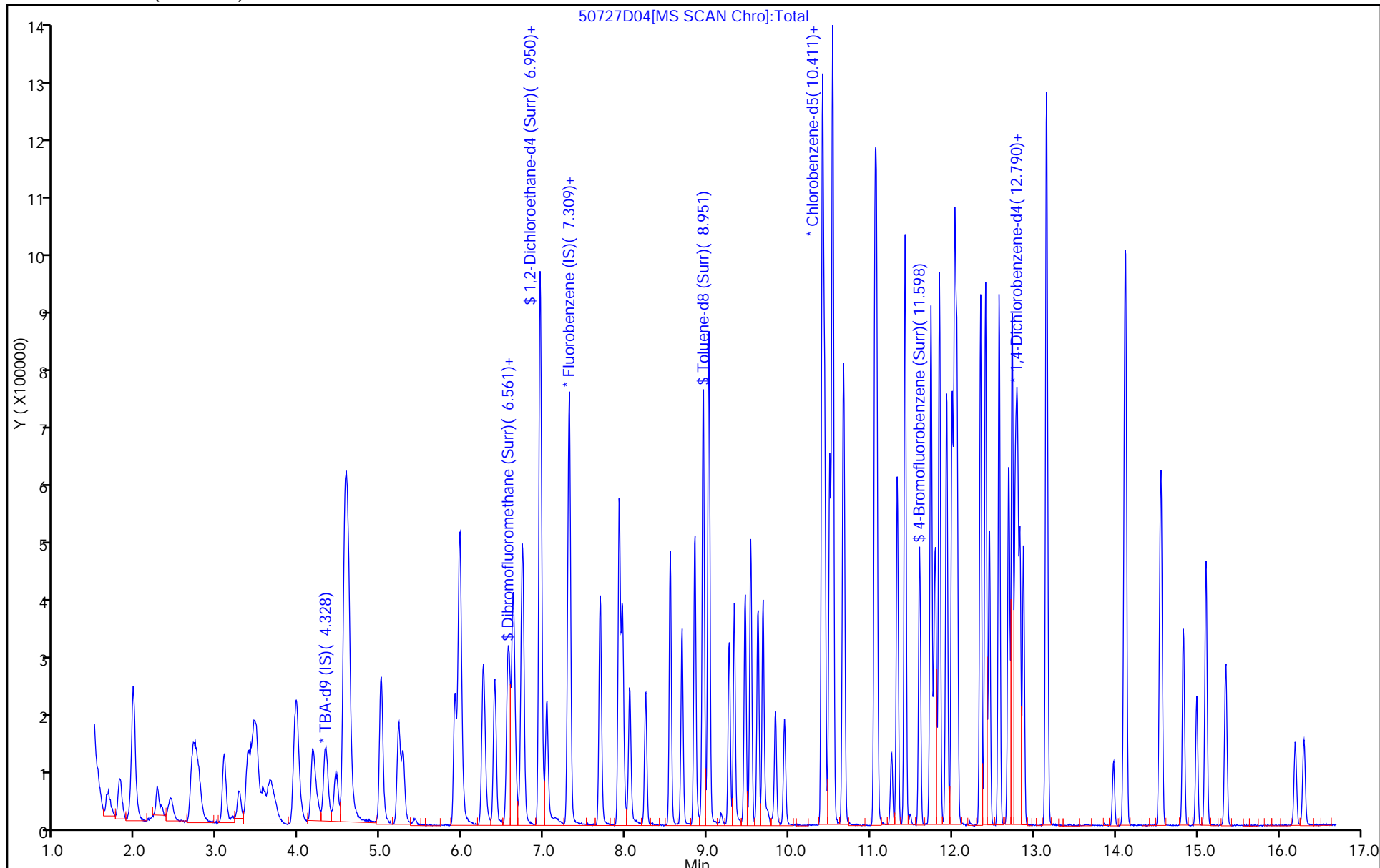
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

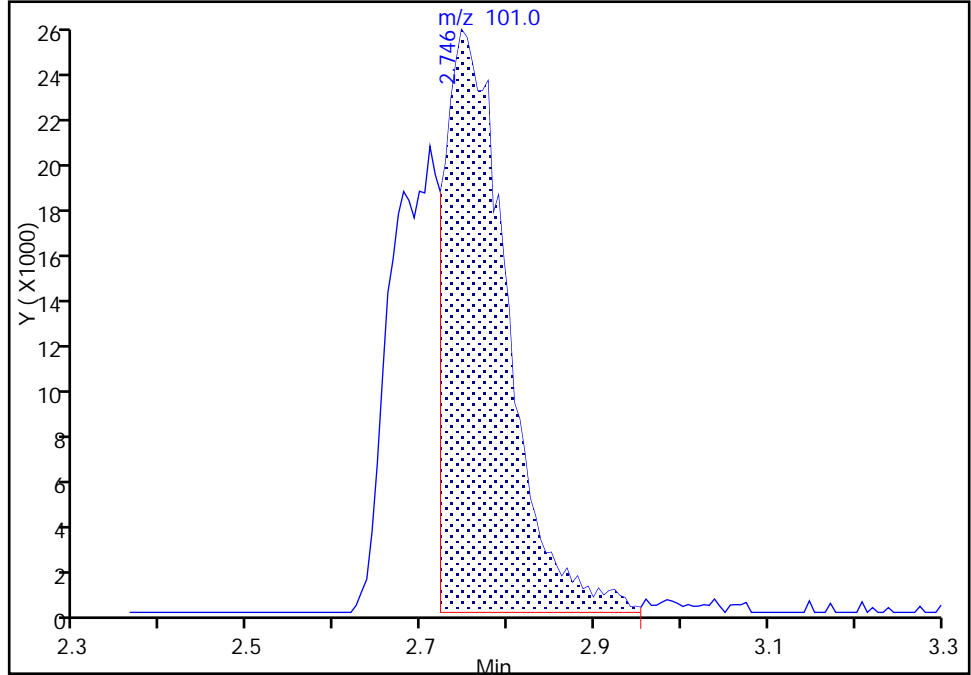
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Injection Date: 27-Jul-2017 01:39:30 Instrument ID: CHHP5  
Lims ID: ICIS VSTD10  
Client ID:  
Operator ID: 034635 ALS Bottle#: 4 Worklist Smp#: 4  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

18 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

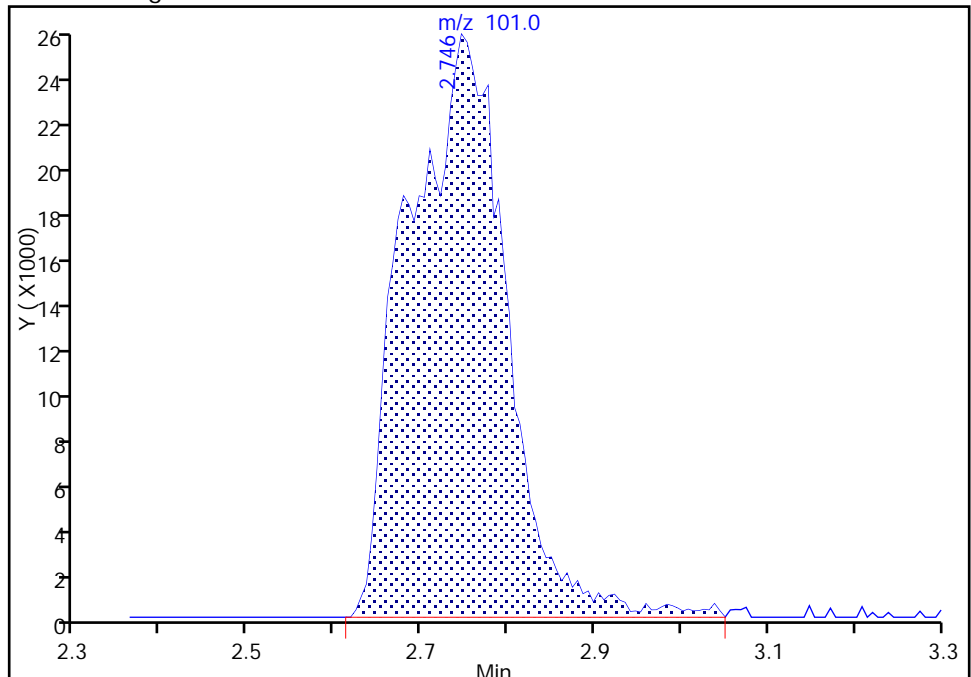
RT: 2.75  
Area: 129465  
Amount: 34.020484  
Amount Units: ng

Processing Integration Results



RT: 2.75  
Area: 205127  
Amount: 52.160696  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 27-Jul-2017 03:15:11  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Pittsburgh

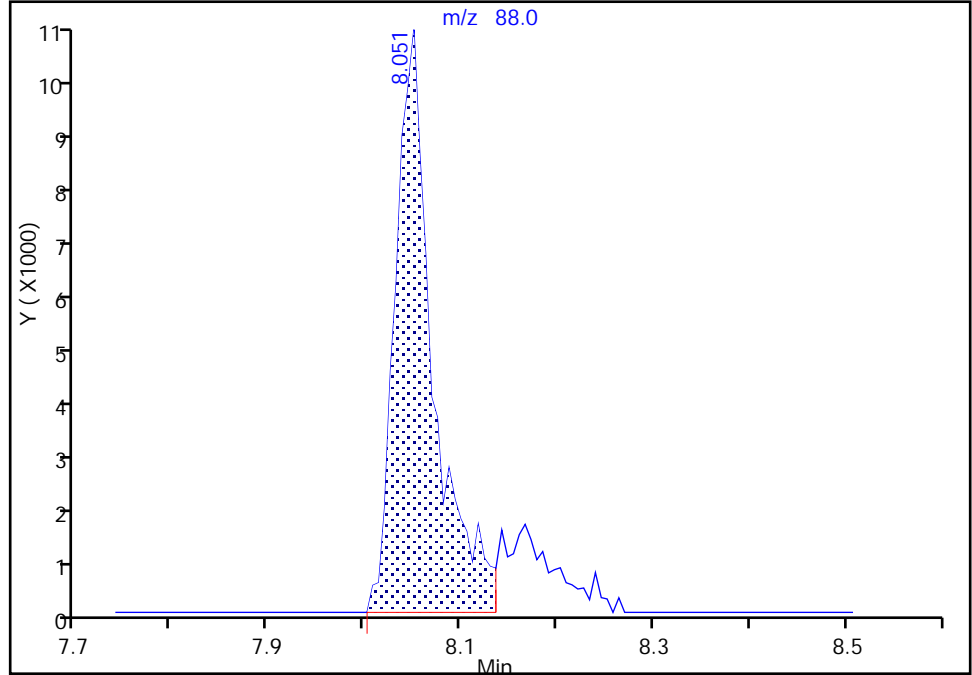
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D04.D  
Injection Date: 27-Jul-2017 01:39:30 Instrument ID: CHHP5  
Lims ID: ICIS VSTD10  
Client ID:  
Operator ID: 034635 ALS Bottle#: 4 Worklist Smp#: 4  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

Signal: 1

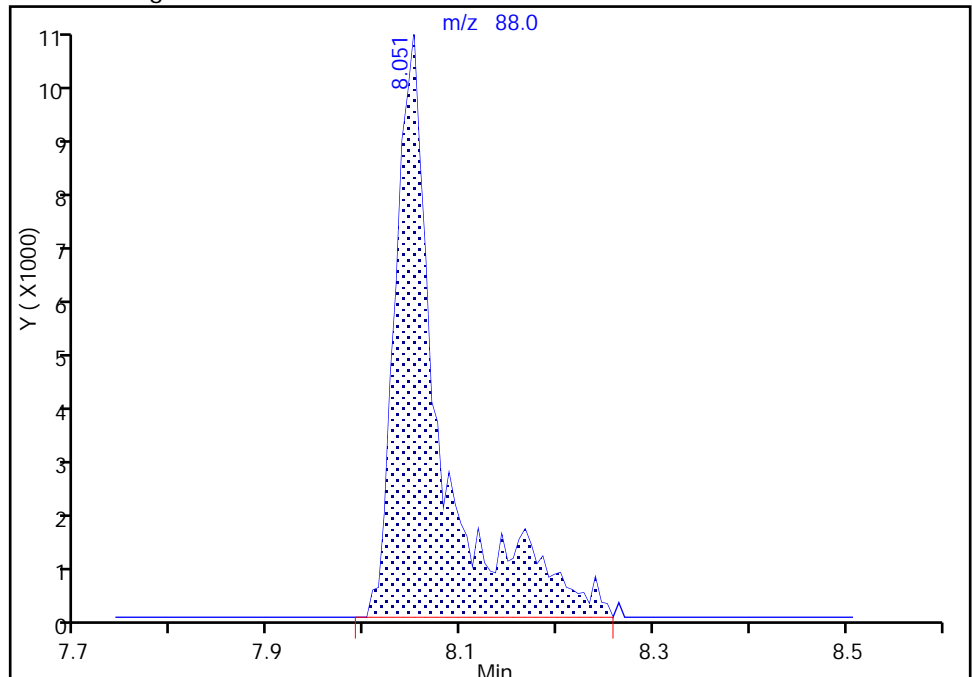
RT: 8.05  
Area: 27736  
Amount: 937.4398  
Amount Units: ng

Processing Integration Results



RT: 8.05  
Area: 33209  
Amount: 1068.7953  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 27-Jul-2017 03:15:41  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D05.D  
 Lims ID: IC VSTD15  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 27-Jul-2017 02:02:30 ALS Bottle#: 5 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-005  
 Misc. Info.: IC VSTD15  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:04:55 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 03:16:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.323	4.323	0.000	0	240814	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.298	7.298	0.000	98	519897	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.406	10.406	0.000	84	132905	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.773	12.773	0.000	91	174376	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.574	6.574	0.000	93	193042	75.0	77.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.945	6.945	0.000	0	234269	75.0	76.8	
\$ 7 Toluene-d8 (Surr)	98	8.946	8.946	0.000	92	780569	75.0	73.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.599	11.599	0.000	88	289432	75.0	75.8	
11 Dichlorodifluoromethane	85	1.646	1.646	0.000	98	226899	75.0	75.1	
12 Chloromethane	50	1.804	1.804	0.000	99	232300	75.0	76.5	
13 Vinyl chloride	62	1.944	1.944	0.000	98	221295	75.0	71.8	
14 Butadiene	39	1.969	1.969	0.000	96	204212	75.0	72.9	
15 Bromomethane	94	2.254	2.254	0.000	90	112119	75.0	76.9	
16 Chloroethane	64	2.419	2.419	0.000	99	128899	75.0	76.1	
17 Dichlorofluoromethane	67	2.699	2.699	0.000	97	327021	75.0	76.3	
18 Trichlorofluoromethane	101	2.741	2.741	0.000	94	283194	75.0	74.8	
20 Ethyl ether	59	3.076	3.076	0.000	87	188662	75.0	76.6	
21 Acrolein	56	3.252	3.252	0.000	99	115103	175.0	185.4	
22 1,1-Dichloroethene	96	3.368	3.368	0.000	97	190985	75.0	75.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.441	3.441	0.000	92	206212	75.0	73.8	
24 Acetone	43	3.477	3.477	0.000	100	227784	150.0	167.5	
25 Iodomethane	142	3.562	3.562	0.000	96	304618	75.0	76.2	
26 Carbon disulfide	76	3.648	3.648	0.000	98	403056	75.0	72.2	
28 3-Chloro-1-propene	76	3.946	3.946	0.000	92	121734	75.0	74.0	
30 Methyl acetate	43	3.976	3.976	0.000	97	419273	150.0	155.7	
31 Methylene Chloride	84	4.165	4.165	0.000	87	242665	75.0	78.8	
32 2-Methyl-2-propanol	59	4.451	4.451	0.000	95	204334	750.0	717.5	
33 Acrylonitrile	53	4.554	4.554	0.000	98	1029651	750.0	786.5	
34 trans-1,2-Dichloroethene	96	4.584	4.584	0.000	97	222245	75.0	76.6	
35 Methyl tert-butyl ether	73	4.603	4.603	0.000	95	613933	75.0	78.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.998	4.998	0.000	93	266987	75.0	71.7	
37 1,1-Dichloroethane	63	5.217	5.217	0.000	96	379320	75.0	75.2	
38 Vinyl acetate	43	5.272	5.272	0.000	97	400099	75.0	78.0	
44 2,2-Dichloropropane	97	5.959	5.959	0.000	93	48893	75.0	76.2	
45 cis-1,2-Dichloroethene	96	5.965	5.965	0.000	79	259385	75.0	78.2	
46 2-Butanone (MEK)	43	5.978	5.978	0.000	98	321867	150.0	166.3	
49 Chlorobromomethane	128	6.245	6.245	0.000	94	113290	75.0	76.8	
51 Tetrahydrofuran	42	6.263	6.263	0.000	87	176266	150.0	156.4	
52 Chloroform	83	6.391	6.391	0.000	93	389323	75.0	77.3	
53 1,1,1-Trichloroethane	97	6.549	6.549	0.000	98	285488	75.0	74.9	
54 Cyclohexane	56	6.622	6.622	0.000	88	345041	75.0	73.4	
56 Carbon tetrachloride	117	6.726	6.726	0.000	97	238173	75.0	75.1	
55 1,1-Dichloropropene	75	6.738	6.738	0.000	98	312373	75.0	75.9	
57 Isobutyl alcohol	41	6.945	6.945	0.000	61	216532	1875.0	2093.1	
58 Benzene	78	6.951	6.951	0.000	97	981851	75.0	77.7	
59 1,2-Dichloroethane	62	7.030	7.030	0.000	98	292683	75.0	79.4	
62 n-Heptane	43	7.316	7.316	0.000	88	214813	75.0	72.2	
64 Trichloroethene	130	7.687	7.687	0.000	98	241861	75.0	76.0	
66 Methylcyclohexane	83	7.918	7.918	0.000	86	358781	75.0	74.6	
67 1,2-Dichloropropane	63	7.961	7.961	0.000	96	227133	75.0	77.2	
68 Dibromomethane	93	8.046	8.046	0.000	95	135198	75.0	78.4	
70 1,4-Dioxane	88	8.052	8.052	0.000	38	46920	1500.0	1567.5	
71 Dichlorobromomethane	83	8.241	8.241	0.000	99	268080	75.0	79.2	
73 2-Chloroethyl vinyl ether	63	8.545	8.545	0.000	92	343066	150.0	162.0	
74 cis-1,3-Dichloropropene	75	8.685	8.685	0.000	96	320956	75.0	78.1	
75 4-Methyl-2-pentanone (MIBK)	43	8.843	8.843	0.000	95	542662	150.0	159.2	
76 Toluene	91	9.019	9.019	0.000	99	1000479	75.0	75.5	
77 trans-1,3-Dichloropropene	75	9.269	9.269	0.000	93	278226	75.0	77.2	
78 Ethyl methacrylate	69	9.330	9.330	0.000	87	352819	75.0	81.1	
79 1,1,2-Trichloroethane	97	9.457	9.457	0.000	91	209928	75.0	76.0	
80 Tetrachloroethene	164	9.530	9.530	0.000	97	184171	75.0	72.9	
81 1,3-Dichloropropane	76	9.615	9.615	0.000	88	397870	75.0	78.0	
82 2-Hexanone	43	9.682	9.682	0.000	93	419354	150.0	160.4	
84 Chlorodibromomethane	129	9.834	9.834	0.000	91	181267	75.0	77.7	
85 Ethylene Dibromide	107	9.944	9.944	0.000	97	223815	75.0	79.0	
86 3-Chlorobenzotrifluoride	180	10.412	10.412	0.000	93	352260	75.0	77.1	
87 Chlorobenzene	112	10.437	10.437	0.000	94	660247	75.0	76.5	
88 4-Chlorobenzotrifluoride	180	10.498	10.498	0.000	96	327327	75.0	77.7	
89 1,1,1,2-Tetrachloroethane	131	10.528	10.528	0.000	92	212641	75.0	77.5	
90 Ethylbenzene	106	10.534	10.534	0.000	98	371119	75.0	77.1	
91 m-Xylene & p-Xylene	106	10.668	10.668	0.000	0	452043	75.0	76.8	
92 o-Xylene	106	11.051	11.051	0.000	95	440285	75.0	78.5	
93 Styrene	104	11.069	11.069	0.000	94	745860	75.0	78.6	
94 Bromoform	173	11.252	11.252	0.000	96	112077	75.0	77.3	
96 2-Chlorobenzotrifluoride	180	11.325	11.325	0.000	97	348911	75.0	79.8	
97 Isopropylbenzene	105	11.422	11.422	0.000	96	1080505	75.0	78.9	
100 Bromobenzene	156	11.739	11.739	0.000	95	261052	75.0	77.1	
99 1,1,2,2-Tetrachloroethane	83	11.745	11.745	0.000	95	316221	75.0	77.4	
102 trans-1,4-Dichloro-2-buten	53	11.775	11.775	0.000	82	83561	75.0	81.9	
101 1,2,3-Trichloropropane	110	11.793	11.793	0.000	85	109372	75.0	78.3	
103 N-Propylbenzene	120	11.842	11.842	0.000	98	291693	75.0	75.4	
104 2-Chlorotoluene	126	11.927	11.927	0.000	97	256066	75.0	76.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.994	11.994	0.000	97	289960	75.0	79.7	
106 1,3,5-Trimethylbenzene	105	12.031	12.031	0.000	94	866332	75.0	78.3	
107 4-Chlorotoluene	126	12.055	12.055	0.000	96	269544	75.0	74.7	
108 tert-Butylbenzene	119	12.347	12.347	0.000	93	721573	75.0	78.0	
110 1,2,4-Trimethylbenzene	105	12.408	12.408	0.000	97	884487	75.0	78.6	
111 1,2-dichloro-4-(trifluorom	214	12.456	12.456	0.000	97	219982	75.0	78.1	
112 sec-Butylbenzene	105	12.572	12.572	0.000	94	993968	75.0	77.0	
113 1,3-Dichlorobenzene	146	12.688	12.688	0.000	97	462404	75.0	76.5	
114 4-Isopropyltoluene	119	12.730	12.730	0.000	96	837492	75.0	77.9	
115 1,4-Dichlorobenzene	146	12.797	12.797	0.000	96	474362	75.0	76.4	
116 2,4-Dichloro-1-(trifluorom	214	12.828	12.828	0.000	94	206368	75.0	78.6	
118 2,5-Dichlorobenzotrifluori	214	12.870	12.870	0.000	0	217211	75.0	76.6	
120 n-Butylbenzene	91	13.150	13.150	0.000	98	671190	75.0	76.5	
121 1,2-Dichlorobenzene	146	13.156	13.156	0.000	98	437966	75.0	76.0	
122 1,2-Dibromo-3-Chloropropan	75	13.971	13.971	0.000	83	47827	75.0	74.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.117	14.117	0.000	0	889724	225.0	243.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.555	14.555	0.000	0	620870	150.0	164.2	
126 1,2,4-Trichlorobenzene	180	14.829	14.829	0.000	94	200638	75.0	76.1	
127 Hexachlorobutadiene	225	14.993	14.993	0.000	98	73984	75.0	76.7	
128 Naphthalene	128	15.103	15.103	0.000	97	733996	75.0	81.7	
129 1,2,3-Trichlorobenzene	180	15.346	15.346	0.000	96	184932	75.0	76.8	
131 2,4,5-Trichlorotoluene	159	16.198	16.198	0.000	0	91488	75.0	79.9	
130 2,3,6-Trichlorotoluene	159	16.307	16.307	0.000	98	89402	75.0	83.9	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		150.0	154.8	
S 133 Xylenes, Total	106				0		150.0	155.3	
S 135 1,3-Dichloropropene, Total	1				0		150.0	155.2	

## QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

## Reagents:

VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260SURR_00071	Amount Added: 3.00	Units: uL
VOA8260VOAPRI_00263	Amount Added: 3.00	Units: uL
voaW2clev1stR_00013	Amount Added: 3.00	Units: uL
voaWAcro1stRe_00016	Amount Added: 7.00	Units: uL
voaWVA1stRest_00017	Amount Added: 3.00	Units: uL
voaWEEmix1stR_00009	Amount Added: 3.00	Units: uL
voaWKetmix1st_00004	Amount Added: 3.00	Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D05.D

Injection Date: 27-Jul-2017 02:02:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: IC VSTD15

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

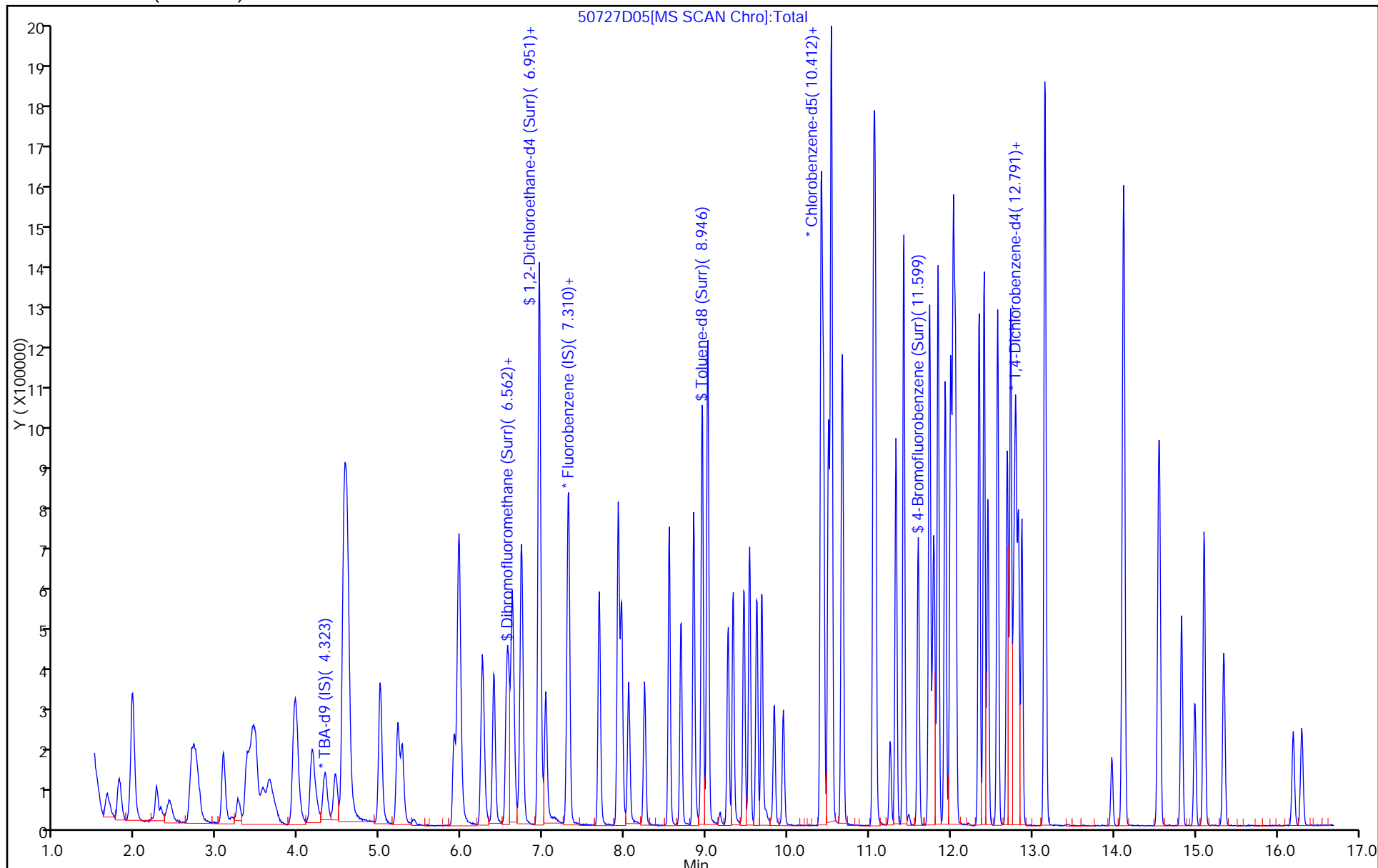
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D06.D  
 Lims ID: IC VSTD20  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 27-Jul-2017 02:26:30 ALS Bottle#: 6 Worklist Smp#: 6  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-006  
 Misc. Info.: IC VSTD20  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:04:58 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 03:06:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.316	4.323	-0.007	0	252187	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.297	7.298	-0.001	98	520193	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.406	10.406	0.000	85	132635	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.772	12.773	-0.001	95	171832	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.573	6.574	-0.001	93	257355	100.0	102.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.944	6.945	-0.001	0	307676	100.0	100.8	
\$ 7 Toluene-d8 (Surr)	98	8.945	8.946	-0.001	92	1040595	100.0	98.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.598	11.599	-0.001	87	390879	100.0	102.5	
11 Dichlorodifluoromethane	85	1.651	1.646	0.005	99	286388	100.0	94.7	
12 Chloromethane	50	1.797	1.804	-0.007	99	302276	100.0	99.4	
13 Vinyl chloride	62	1.949	1.944	0.005	98	291558	100.0	94.5	
14 Butadiene	39	1.962	1.969	-0.006	92	260580	100.0	93.0	
15 Bromomethane	94	2.260	2.254	0.006	90	161865	100.0	111.0	
16 Chloroethane	64	2.412	2.419	-0.007	99	172552	100.0	101.8	
17 Dichlorofluoromethane	67	2.710	2.699	0.011	97	436022	100.0	101.7	
18 Trichlorofluoromethane	101	2.734	2.741	-0.007	96	371684	100.0	98.1	
20 Ethyl ether	59	3.081	3.076	0.005	89	262150	100.0	106.3	
21 Acrolein	56	3.264	3.252	0.012	99	130923	200.0	210.7	
22 1,1-Dichloroethene	96	3.373	3.368	0.005	98	247279	100.0	97.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.446	3.441	0.005	93	263603	100.0	94.3	
24 Acetone	43	3.476	3.477	-0.001	100	316026	200.0	232.3	
25 Iodomethane	142	3.562	3.562	0.000	98	408622	100.0	102.2	
26 Carbon disulfide	76	3.647	3.648	-0.001	99	561008	100.0	100.4	
28 3-Chloro-1-propene	76	3.951	3.946	0.005	92	164305	100.0	99.8	
30 Methyl acetate	43	3.969	3.976	-0.007	97	558912	200.0	207.5	
31 Methylene Chloride	84	4.164	4.165	-0.001	93	323324	100.0	106.0	
32 2-Methyl-2-propanol	59	4.444	4.451	-0.007	94	283777	1000.0	951.5	
33 Acrylonitrile	53	4.553	4.554	-0.001	99	1387354	1000.0	1059.2	
34 trans-1,2-Dichloroethene	96	4.584	4.584	0.000	98	296608	100.0	102.2	
35 Methyl tert-butyl ether	73	4.602	4.603	-0.001	95	822838	100.0	105.8	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.003	4.998	0.005	92	337300	100.0	90.6	
37 1,1-Dichloroethane	63	5.210	5.217	-0.007	96	510811	100.0	101.2	
38 Vinyl acetate	43	5.265	5.272	-0.007	97	532250	100.0	103.7	
44 2,2-Dichloropropane	97	5.959	5.959	-0.001	57	65750	100.0	102.4	
45 cis-1,2-Dichloroethene	96	5.965	5.965	0.000	79	347303	100.0	104.6	
46 2-Butanone (MEK)	43	5.983	5.978	0.005	98	426755	200.0	220.4	
49 Chlorobromomethane	128	6.251	6.245	0.005	94	155416	100.0	105.4	
51 Tetrahydrofuran	42	6.263	6.263	0.000	86	224432	200.0	199.0	
52 Chloroform	83	6.390	6.391	-0.001	92	517765	100.0	102.8	
53 1,1,1-Trichloroethane	97	6.555	6.549	0.006	98	383868	100.0	100.7	
54 Cyclohexane	56	6.622	6.622	0.000	89	446560	100.0	94.9	
56 Carbon tetrachloride	117	6.725	6.726	-0.001	96	317033	100.0	99.9	
55 1,1-Dichloropropene	75	6.737	6.738	-0.001	98	408627	100.0	99.2	
58 Benzene	78	6.956	6.951	0.005	97	1307056	100.0	103.3	
57 Isobutyl alcohol	41	6.944	6.945	-0.001	91	290317	2500.0	2804.8	
59 1,2-Dichloroethane	62	7.029	7.030	-0.001	97	385206	100.0	104.5	
62 n-Heptane	43	7.315	7.316	-0.001	89	279216	100.0	93.8	
64 Trichloroethene	130	7.686	7.687	-0.001	98	329499	100.0	103.5	
66 Methylcyclohexane	83	7.917	7.918	-0.001	87	467268	100.0	97.1	
67 1,2-Dichloropropane	63	7.960	7.961	-0.001	96	309491	100.0	105.1	
68 Dibromomethane	93	8.051	8.046	0.005	96	184529	100.0	106.9	
70 1,4-Dioxane	88	8.045	8.052	-0.007	39	65688	2000.0	2193.3	
71 Dichlorobromomethane	83	8.240	8.241	-0.001	99	366097	100.0	108.1	
73 2-Chloroethyl vinyl ether	63	8.544	8.545	-0.001	92	467677	200.0	220.7	
74 cis-1,3-Dichloropropene	75	8.684	8.685	-0.001	96	447138	100.0	108.7	
75 4-Methyl-2-pentanone (MIBK)	43	8.842	8.843	-0.001	95	738839	200.0	217.2	
76 Toluene	91	9.018	9.019	-0.001	99	1332783	100.0	100.8	
77 trans-1,3-Dichloropropene	75	9.268	9.269	-0.001	92	396221	100.0	110.1	
78 Ethyl methacrylate	69	9.329	9.330	-0.001	87	483364	100.0	111.4	
79 1,1,2-Trichloroethane	97	9.456	9.457	-0.001	90	283688	100.0	103.0	
80 Tetrachloroethene	164	9.529	9.530	-0.001	97	244346	100.0	96.9	
81 1,3-Dichloropropane	76	9.615	9.615	0.000	89	518120	100.0	101.7	
82 2-Hexanone	43	9.676	9.682	-0.006	94	581383	200.0	222.8	
84 Chlorodibromomethane	129	9.834	9.834	0.000	90	254603	100.0	109.3	
85 Ethylene Dibromide	107	9.943	9.944	-0.001	99	294438	100.0	104.2	
86 3-Chlorobenzotrifluoride	180	10.412	10.412	0.000	94	461082	100.0	101.2	
87 Chlorobenzene	112	10.436	10.437	-0.001	95	877804	100.0	102.0	
88 4-Chlorobenzotrifluoride	180	10.497	10.498	-0.001	96	420704	100.0	100.0	
90 Ethylbenzene	106	10.533	10.534	-0.001	98	499116	100.0	103.8	
89 1,1,1,2-Tetrachloroethane	131	10.527	10.528	-0.001	92	289044	100.0	105.6	
91 m-Xylene & p-Xylene	106	10.667	10.668	-0.001	0	610286	100.0	103.9	
92 o-Xylene	106	11.050	11.051	-0.001	95	592117	100.0	105.8	
93 Styrene	104	11.075	11.069	0.006	94	1002147	100.0	105.8	
94 Bromoform	173	11.251	11.252	-0.001	97	157509	100.0	108.8	
96 2-Chlorobenzotrifluoride	180	11.324	11.325	-0.001	97	454842	100.0	104.3	
97 Isopropylbenzene	105	11.421	11.422	-0.001	96	1415676	100.0	103.6	
99 1,1,2,2-Tetrachloroethane	83	11.738	11.745	-0.007	95	412534	100.0	101.1	
100 Bromobenzene	156	11.738	11.739	-0.001	95	348475	100.0	104.5	
102 trans-1,4-Dichloro-2-buten	53	11.774	11.775	-0.001	82	104361	100.0	103.8	
101 1,2,3-Trichloropropane	110	11.793	11.793	0.000	85	144469	100.0	105.0	
103 N-Propylbenzene	120	11.841	11.842	-0.001	98	387234	100.0	101.6	
104 2-Chlorotoluene	126	11.926	11.927	-0.001	97	344800	100.0	104.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.999	11.994	0.005	96	381649	100.0	106.5	
106 1,3,5-Trimethylbenzene	105	12.030	12.031	-0.001	94	1140888	100.0	104.6	
107 4-Chlorotoluene	126	12.054	12.055	-0.001	96	369832	100.0	104.0	
108 tert-Butylbenzene	119	12.346	12.347	-0.001	93	931884	100.0	102.2	
110 1,2,4-Trimethylbenzene	105	12.407	12.408	-0.001	97	1156912	100.0	104.4	
111 1,2-dichloro-4-(trifluorom	214	12.456	12.456	0.000	97	277157	100.0	99.8	
112 sec-Butylbenzene	105	12.571	12.572	-0.001	94	1298722	100.0	102.1	
113 1,3-Dichlorobenzene	146	12.687	12.688	-0.001	97	613101	100.0	102.9	
114 4-Isopropyltoluene	119	12.729	12.730	-0.001	96	1086140	100.0	102.5	
115 1,4-Dichlorobenzene	146	12.796	12.797	-0.001	94	622850	100.0	101.8	
116 2,4-Dichloro-1-(trifluorom	214	12.827	12.828	-0.001	96	267418	100.0	103.4	
118 2,5-Dichlorobenzotrifluori	214	12.869	12.870	-0.001	0	279514	100.0	100.1	
120 n-Butylbenzene	91	13.149	13.150	-0.001	97	885288	100.0	102.4	
121 1,2-Dichlorobenzene	146	13.155	13.156	-0.001	97	577962	100.0	101.8	
122 1,2-Dibromo-3-Chloropropan	75	13.970	13.971	-0.001	85	68470	100.0	108.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.116	14.117	-0.001	0	1151252	300.0	319.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.548	14.555	-0.007	0	814032	200.0	218.5	
126 1,2,4-Trichlorobenzene	180	14.828	14.829	-0.001	95	266863	100.0	102.7	
127 Hexachlorobutadiene	225	14.992	14.993	-0.001	97	94134	100.0	99.0	
128 Naphthalene	128	15.102	15.103	-0.001	97	990398	100.0	111.9	
129 1,2,3-Trichlorobenzene	180	15.345	15.346	-0.001	97	247660	100.0	104.3	
131 2,4,5-Trichlorotoluene	159	16.197	16.198	-0.001	0	122498	100.0	108.5	
130 2,3,6-Trichlorotoluene	159	16.306	16.307	-0.001	96	115009	100.0	109.5	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		200.0	209.7	
S 134 1,2-Dichloroethene, Total	96				0		200.0	206.9	
S 135 1,3-Dichloropropene, Total	1				0		200.0	218.8	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260SURR_00071	Amount Added: 4.00	Units: uL
VOA8260VOAPRI_00263	Amount Added: 4.00	Units: uL
voaW2clev1stR_00013	Amount Added: 4.00	Units: uL
voaWAcro1stRe_00016	Amount Added: 8.00	Units: uL
voaWVA1stRest_00017	Amount Added: 4.00	Units: uL
voaWEEmix1stR_00009	Amount Added: 4.00	Units: uL
voaWKetmix1st_00004	Amount Added: 4.00	Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D06.D

Injection Date: 27-Jul-2017 02:26:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: IC VSTD20

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

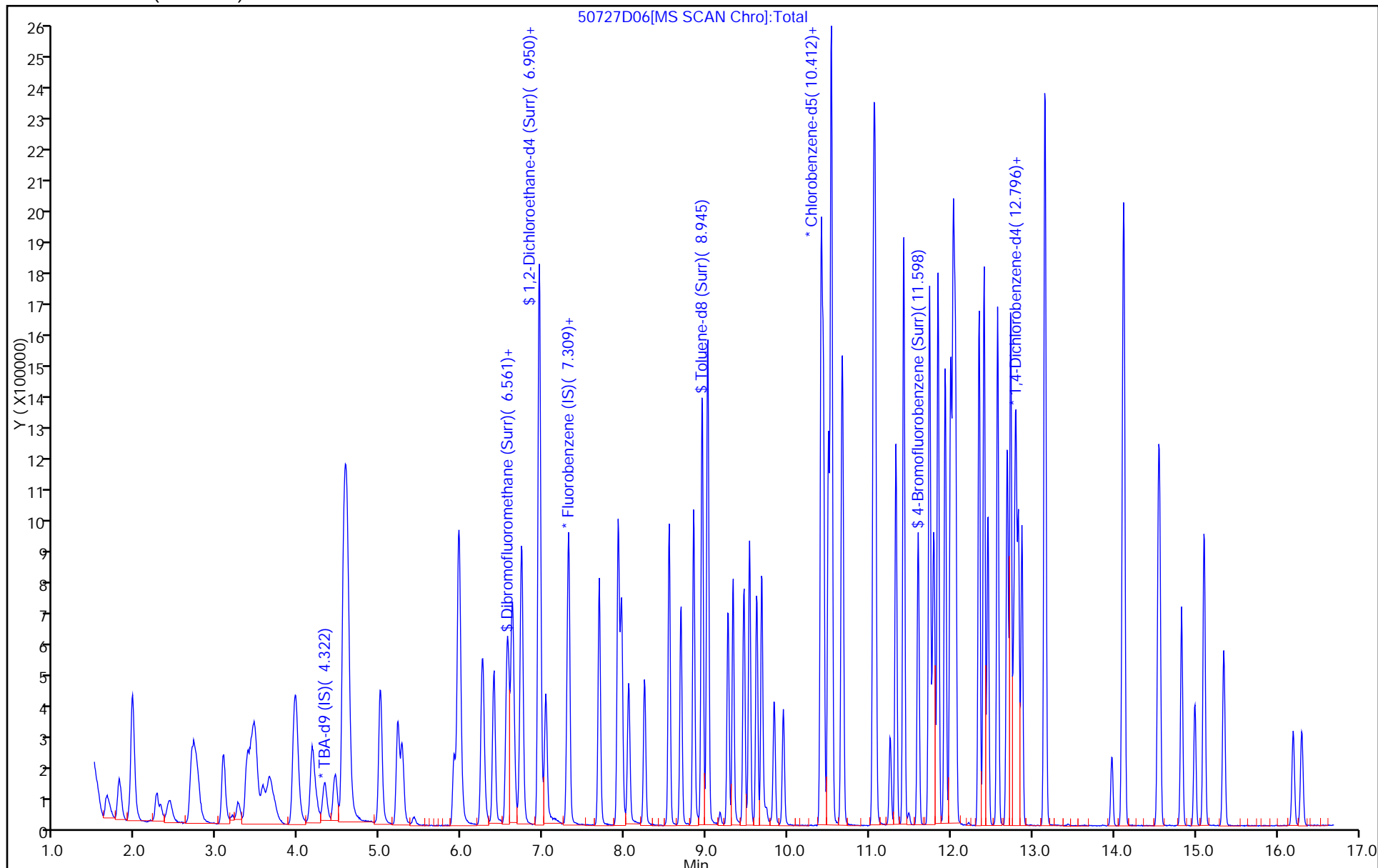
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D08.D  
 Lims ID: IC VSTD40  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 27-Jul-2017 03:13:30 ALS Bottle#: 8 Worklist Smp#: 8  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-008  
 Misc. Info.: IC VSTD40  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:05:02 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 03:34:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.337	4.323	0.013	0	252542	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.299	7.298	0.001	99	561296	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.408	10.406	0.002	56	150914	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.768	12.773	-0.005	90	189484	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.575	6.574	0.001	94	522323	200.0	193.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.946	6.945	0.001	0	628942	200.0	190.9	
\$ 7 Toluene-d8 (Surr)	98	8.948	8.946	0.002	92	2000995	200.0	166.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.594	11.599	-0.005	92	793129	200.0	182.8	
11 Dichlorodifluoromethane	85	1.654	1.646	0.008	99	569791	200.0	174.6	
12 Chloromethane	50	1.812	1.804	0.008	99	580608	200.0	177.0	
13 Vinyl chloride	62	1.958	1.944	0.014	97	577090	200.0	173.4	
14 Butadiene	39	1.970	1.969	0.002	94	512032	200.0	169.3	
15 Bromomethane	94	2.268	2.254	0.014	91	289712	200.0	184.1	
16 Chloroethane	64	2.426	2.419	0.007	99	322589	200.0	176.3	
17 Dichlorofluoromethane	67	2.706	2.699	0.007	97	819020	200.0	177.0	
18 Trichlorofluoromethane	101	2.761	2.741	0.020	97	710415	200.0	173.7	
20 Ethyl ether	59	3.077	3.076	0.001	88	510033	200.0	191.7	
21 Acrolein	56	3.260	3.252	0.008	100	179414	250.0	267.6	
22 1,1-Dichloroethene	96	3.369	3.368	0.001	96	489503	200.0	178.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.442	3.441	0.001	93	534815	200.0	177.3	
24 Acetone	43	3.485	3.477	0.008	100	522287	400.0	355.8	
25 Iodomethane	142	3.576	3.562	0.014	98	834240	200.0	193.3	
26 Carbon disulfide	76	3.649	3.648	0.001	99	1211678	200.0	200.9	
28 3-Chloro-1-propene	76	3.947	3.946	0.001	92	366340	200.0	206.3	
30 Methyl acetate	43	3.978	3.976	0.002	97	1173609	400.0	403.7	
31 Methylene Chloride	84	4.166	4.165	0.001	88	653341	200.0	201.5	
32 2-Methyl-2-propanol	59	4.464	4.451	0.013	93	519054	2000.0	1737.9	
33 Acrylonitrile	53	4.562	4.554	0.008	99	2794353	2000.0	1977.2	
34 trans-1,2-Dichloroethene	96	4.580	4.584	-0.004	97	571864	200.0	182.6	
35 Methyl tert-butyl ether	73	4.604	4.603	0.001	95	1751345	200.0	208.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.000	4.998	0.002	92	708650	200.0	176.3	
37 1,1-Dichloroethane	63	5.219	5.217	0.002	96	1041269	200.0	191.3	
38 Vinyl acetate	43	5.273	5.272	0.001	97	1200052	200.0	216.8	
44 2,2-Dichloropropane	97	5.961	5.959	0.002	88	125406	200.0	180.9	
45 cis-1,2-Dichloroethene	96	5.967	5.965	0.002	80	687049	200.0	191.8	
46 2-Butanone (MEK)	43	5.979	5.978	0.001	98	795793	400.0	380.9	
49 Chlorobromomethane	128	6.247	6.245	0.002	94	313977	200.0	197.3	
51 Tetrahydrofuran	42	6.265	6.263	0.002	86	488432	400.0	401.4	
52 Chloroform	83	6.393	6.391	0.002	93	1037446	200.0	190.8	
53 1,1,1-Trichloroethane	97	6.551	6.549	0.002	98	777880	200.0	189.0	
54 Cyclohexane	56	6.618	6.622	-0.004	90	922281	200.0	181.6	
56 Carbon tetrachloride	117	6.721	6.726	-0.005	97	646700	200.0	188.8	
55 1,1-Dichloropropene	75	6.739	6.738	0.001	97	825970	200.0	185.8	
57 Isobutyl alcohol	41	6.946	6.945	0.001	51	587752	5000.0	5262.5	
58 Benzene	78	6.952	6.951	0.001	97	2487856	200.0	182.3	
59 1,2-Dichloroethane	62	7.031	7.030	0.001	97	767974	200.0	193.0	
62 n-Heptane	43	7.311	7.316	-0.005	87	573064	200.0	178.3	
64 Trichloroethene	130	7.682	7.687	-0.005	98	647404	200.0	188.5	
66 Methylcyclohexane	83	7.920	7.918	0.002	87	950167	200.0	183.0	
67 1,2-Dichloropropane	63	7.962	7.961	0.001	96	624637	200.0	196.5	
68 Dibromomethane	93	8.047	8.046	0.001	95	374289	200.0	201.0	
70 1,4-Dioxane	88	8.041	8.052	-0.011	39	135844	4000.0	4203.6	
71 Dichlorobromomethane	83	8.242	8.241	0.001	99	752352	200.0	205.8	
73 2-Chloroethyl vinyl ether	63	8.546	8.545	0.001	93	977190	400.0	427.3	
74 cis-1,3-Dichloropropene	75	8.686	8.685	0.001	96	933591	200.0	210.3	
75 4-Methyl-2-pentanone (MIBK)	43	8.844	8.843	0.001	95	1476808	400.0	381.5	
76 Toluene	91	9.015	9.019	-0.004	98	2540251	200.0	168.8	
77 trans-1,3-Dichloropropene	75	9.264	9.269	-0.005	92	850338	200.0	207.7	
78 Ethyl methacrylate	69	9.325	9.330	-0.005	88	1001550	200.0	202.8	
79 1,1,2-Trichloroethane	97	9.459	9.457	0.002	91	569083	200.0	181.5	
80 Tetrachloroethene	164	9.532	9.530	0.002	97	486427	200.0	169.5	
81 1,3-Dichloropropane	76	9.617	9.615	0.002	89	1058308	200.0	182.6	
82 2-Hexanone	43	9.678	9.682	-0.004	93	1109580	400.0	373.7	
84 Chlorodibromomethane	129	9.830	9.834	-0.004	89	540065	200.0	203.8	
85 Ethylene Dibromide	107	9.945	9.944	0.001	98	607203	200.0	188.9	
86 3-Chlorobenzotrifluoride	180	10.408	10.412	-0.004	93	869071	200.0	167.6	
87 Chlorobenzene	112	10.432	10.437	-0.005	93	1704167	200.0	174.0	
88 4-Chlorobenzotrifluoride	180	10.499	10.498	0.001	96	810848	200.0	169.4	
89 1,1,1,2-Tetrachloroethane	131	10.529	10.528	0.001	94	590452	200.0	189.5	
90 Ethylbenzene	106	10.536	10.534	0.002	98	972676	200.0	177.9	
91 m-Xylene & p-Xylene	106	10.669	10.668	0.001	0	1217768	200.0	182.2	
92 o-Xylene	106	11.053	11.051	0.002	95	1159372	200.0	182.1	
93 Styrene	104	11.071	11.069	0.002	94	1967591	200.0	182.6	
94 Bromoform	173	11.253	11.252	0.001	96	350923	200.0	213.1	
96 2-Chlorobenzotrifluoride	180	11.326	11.325	0.001	96	875687	200.0	176.5	
97 Isopropylbenzene	105	11.418	11.422	-0.004	96	2665903	200.0	171.5	
100 Bromobenzene	156	11.734	11.739	-0.005	95	711710	200.0	193.5	
99 1,1,2,2-Tetrachloroethane	83	11.740	11.745	-0.005	93	870164	200.0	187.5	
102 trans-1,4-Dichloro-2-buten	53	11.777	11.775	0.002	85	225821	200.0	203.6	
101 1,2,3-Trichloropropane	110	11.795	11.793	0.002	85	299299	200.0	197.2	
103 N-Propylbenzene	120	11.844	11.842	0.002	97	774184	200.0	184.2	
104 2-Chlorotoluene	126	11.929	11.927	0.002	97	700158	200.0	192.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.996	11.994	0.002	96	742625	200.0	187.9	
106 1,3,5-Trimethylbenzene	105	12.026	12.031	-0.005	94	2188229	200.0	182.0	
107 4-Chlorotoluene	126	12.056	12.055	0.001	95	738280	200.0	188.2	
108 tert-Butylbenzene	119	12.342	12.347	-0.005	93	1809964	200.0	180.0	
110 1,2,4-Trimethylbenzene	105	12.403	12.408	-0.005	97	2260604	200.0	184.9	
111 1,2-dichloro-4-(trifluorom	214	12.452	12.456	-0.004	97	542681	200.0	177.2	
112 sec-Butylbenzene	105	12.574	12.572	0.002	95	2474312	200.0	176.4	
113 1,3-Dichlorobenzene	146	12.689	12.688	0.001	97	1215884	200.0	185.0	
114 4-Isopropyltoluene	119	12.732	12.730	0.002	96	2107989	200.0	180.4	
115 1,4-Dichlorobenzene	146	12.799	12.797	0.002	95	1249173	200.0	185.1	
116 2,4-Dichloro-1-(trifluorom	214	12.829	12.828	0.001	95	497225	200.0	174.4	
118 2,5-Dichlorobenzotrifluori	214	12.872	12.870	0.002	0	580659	200.0	188.5	
120 n-Butylbenzene	91	13.151	13.150	0.001	96	1729209	200.0	181.5	
121 1,2-Dichlorobenzene	146	13.158	13.156	0.002	97	1161072	200.0	185.4	
122 1,2-Dibromo-3-Chloropropan	75	13.973	13.971	0.002	85	151695	200.0	218.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.119	14.117	0.002	0	2228710	600.0	561.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.551	14.555	-0.004	0	1589536	400.0	386.9	
126 1,2,4-Trichlorobenzene	180	14.830	14.829	0.001	94	552245	200.0	192.7	
127 Hexachlorobutadiene	225	14.995	14.993	0.002	98	180140	200.0	171.8	
128 Naphthalene	128	15.104	15.103	0.001	97	2008065	200.0	205.7	
129 1,2,3-Trichlorobenzene	180	15.348	15.346	0.002	96	497473	200.0	190.0	
131 2,4,5-Trichlorotoluene	159	16.199	16.198	0.001	0	253594	200.0	203.8	
130 2,3,6-Trichlorotoluene	159	16.303	16.307	-0.004	97	237299	200.0	205.0	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		400.0	374.5	
S 133 Xylenes, Total	106				0		400.0	364.3	
S 135 1,3-Dichloropropene, Total	1				0		400.0	418.0	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260SURR_00071	Amount Added: 8.00	Units: uL
VOA8260VOAPRI_00263	Amount Added: 8.00	Units: uL
voaW2clev1stR_00013	Amount Added: 8.00	Units: uL
voaWAcro1stRe_00016	Amount Added: 10.00	Units: uL
voaWVA1stRest_00017	Amount Added: 8.00	Units: uL
voaWEEmix1stR_00009	Amount Added: 8.00	Units: uL
voaWKetmix1st_00004	Amount Added: 8.00	Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D08.D

Injection Date: 27-Jul-2017 03:13:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: IC VSTD40

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

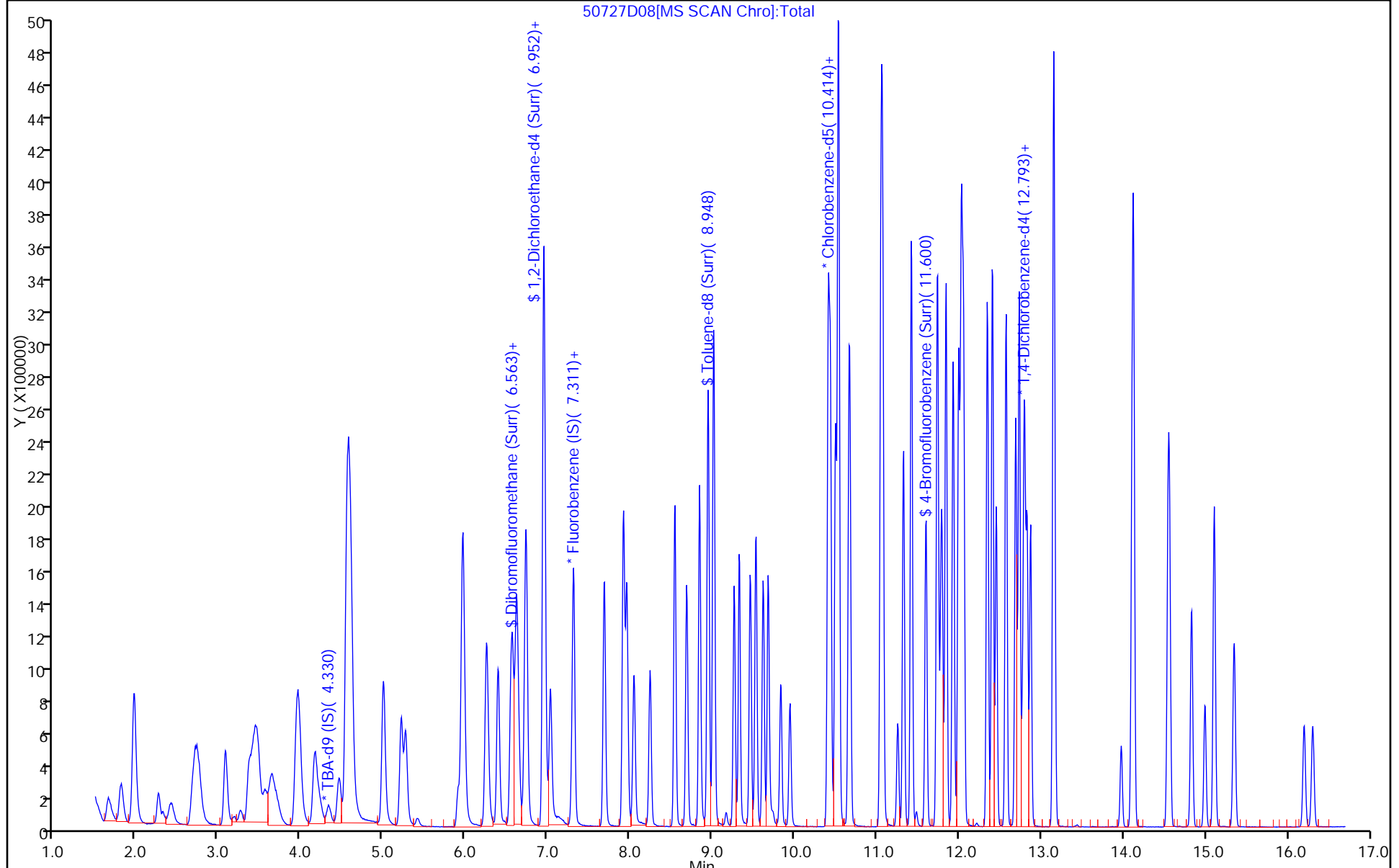
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D10.D  
 Lims ID: IC VSTD35  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 27-Jul-2017 04:00:30 ALS Bottle#: 10 Worklist Smp#: 10  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-010  
 Misc. Info.: IC VSTD35  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:05:06 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 04:42:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.328	4.323	0.005	0	232894	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.296	7.298	-0.002	94	610088	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.405	10.406	-0.001	86	155120	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.771	12.773	-0.002	90	193547	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.572	6.574	-0.002	94	505019	175.0	172.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.943	6.945	-0.002	0	575099	175.0	160.6	
\$ 7 Toluene-d8 (Surr)	98	8.951	8.946	0.005	92	1992609	175.0	161.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.597	11.599	-0.002	87	748217	175.0	167.8	
11 Dichlorodifluoromethane	85	1.651	1.646	0.005	99	647803	175.0	182.6	
12 Chloromethane	50	1.809	1.804	0.005	99	595751	175.0	167.1	
13 Vinyl chloride	62	1.961	1.944	0.017	98	632153	175.0	174.7	
14 Butadiene	39	1.967	1.969	-0.001	93	579584	175.0	176.3	
15 Bromomethane	94	2.265	2.254	0.011	91	285707	175.0	167.0	
16 Chloroethane	64	2.417	2.419	-0.002	99	340168	175.0	171.1	
17 Dichlorofluoromethane	67	2.703	2.699	0.004	97	845136	175.0	168.0	
18 Trichlorofluoromethane	101	2.746	2.741	0.005	96	769762	175.0	173.1	
20 Ethyl ether	59	3.074	3.076	-0.002	88	475422	175.0	164.4	
21 Acrolein	56	3.269	3.252	0.017	99	154738	225.0	212.3	
22 1,1-Dichloroethene	96	3.372	3.368	0.004	96	540044	175.0	180.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.452	3.441	0.011	92	571742	175.0	174.4	
24 Acetone	43	3.482	3.477	0.005	99	447756	350.0	280.6	
25 Iodomethane	142	3.561	3.562	-0.001	96	811997	175.0	173.1	
26 Carbon disulfide	76	3.646	3.648	-0.002	99	1310811	175.0	200.0	
28 3-Chloro-1-propene	76	3.944	3.946	-0.002	93	365237	175.0	189.2	
30 Methyl acetate	43	3.975	3.976	-0.001	97	1009713	350.0	319.6	
31 Methylene Chloride	84	4.163	4.165	-0.002	89	602402	175.0	170.4	
32 2-Methyl-2-propanol	59	4.455	4.451	0.004	93	524619	1750.0	1904.7	
33 Acrylonitrile	53	4.553	4.554	-0.001	99	2362587	1750.0	1538.0	
34 trans-1,2-Dichloroethene	96	4.577	4.584	-0.007	98	595572	175.0	175.0	
35 Methyl tert-butyl ether	73	4.601	4.603	-0.002	96	1597553	175.0	175.1	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.997	4.998	-0.001	91	760411	175.0	174.1	
37 1,1-Dichloroethane	63	5.216	5.217	-0.001	96	1024340	175.0	173.1	
38 Vinyl acetate	43	5.270	5.272	-0.002	97	1068205	175.0	177.5	
44 2,2-Dichloropropane	97	5.958	5.959	-0.001	91	136605	175.0	181.3	
45 cis-1,2-Dichloroethene	96	5.964	5.965	-0.001	79	671208	175.0	172.4	
46 2-Butanone (MEK)	43	5.982	5.978	0.004	100	686266	350.0	302.2	
49 Chlorobromomethane	128	6.250	6.245	0.005	95	291754	175.0	168.6	
51 Tetrahydrofuran	42	6.262	6.263	-0.001	87	396477	350.0	299.8	
52 Chloroform	83	6.396	6.391	0.005	92	989929	175.0	167.5	
53 1,1,1-Trichloroethane	97	6.554	6.549	0.005	98	811476	175.0	181.4	
54 Cyclohexane	56	6.621	6.622	-0.001	90	1012965	175.0	183.5	
56 Carbon tetrachloride	117	6.718	6.726	-0.008	97	682784	175.0	183.4	
55 1,1-Dichloropropene	75	6.737	6.738	-0.001	97	866715	175.0	179.4	
57 Isobutyl alcohol	41	6.950	6.945	0.005	91	452876	4375.0	3730.6	
58 Benzene	78	6.956	6.951	0.005	97	2459963	175.0	165.8	
59 1,2-Dichloroethane	62	7.029	7.030	-0.001	97	708898	175.0	163.9	
62 n-Heptane	43	7.315	7.316	-0.001	88	633483	175.0	181.4	
64 Trichloroethene	130	7.686	7.687	-0.001	98	648262	175.0	173.7	
66 Methylcyclohexane	83	7.917	7.918	-0.001	87	1041060	175.0	184.4	
67 1,2-Dichloropropane	63	7.959	7.961	-0.002	95	596512	175.0	172.7	
68 Dibromomethane	93	8.045	8.046	-0.001	96	342853	175.0	169.4	
70 1,4-Dioxane	88	8.045	8.052	-0.007	39	115916	3500.0	3300.1	
71 Dichlorobromomethane	83	8.239	8.241	-0.002	100	712434	175.0	179.3	
73 2-Chloroethyl vinyl ether	63	8.543	8.545	-0.002	92	864836	350.0	347.9	
74 cis-1,3-Dichloropropene	75	8.689	8.685	0.004	96	881560	175.0	182.7	
75 4-Methyl-2-pentanone (MIBK)	43	8.841	8.843	-0.002	95	1265241	350.0	318.0	
76 Toluene	91	9.018	9.019	-0.001	98	2496911	175.0	161.4	
77 trans-1,3-Dichloropropene	75	9.267	9.269	-0.002	93	781619	175.0	185.7	
78 Ethyl methacrylate	69	9.328	9.330	-0.002	88	905216	175.0	178.4	
79 1,1,2-Trichloroethane	97	9.462	9.457	0.005	90	523017	175.0	162.3	
80 Tetrachloroethene	164	9.529	9.530	-0.001	97	498519	175.0	169.0	
81 1,3-Dichloropropane	76	9.620	9.615	0.005	89	969241	175.0	162.7	
82 2-Hexanone	43	9.681	9.682	-0.001	94	977068	350.0	320.2	
84 Chlorodibromomethane	129	9.833	9.834	-0.001	90	489506	175.0	179.7	
85 Ethylene Dibromide	107	9.943	9.944	-0.001	99	550826	175.0	166.7	
86 3-Chlorobenzotrifluoride	180	10.411	10.412	-0.001	93	874266	175.0	164.0	
87 Chlorobenzene	112	10.435	10.437	-0.002	94	1645967	175.0	163.5	
88 4-Chlorobenzotrifluoride	180	10.496	10.498	-0.002	95	826850	175.0	168.1	
89 1,1,1,2-Tetrachloroethane	131	10.527	10.528	-0.001	93	554351	175.0	173.1	
90 Ethylbenzene	106	10.533	10.534	-0.001	97	962208	175.0	171.2	
91 m-Xylene & p-Xylene	106	10.667	10.668	-0.001	0	1197380	175.0	174.3	
92 o-Xylene	106	11.050	11.051	-0.001	95	1130677	175.0	172.8	
93 Styrene	104	11.068	11.069	-0.001	94	1866053	175.0	168.4	
94 Bromoform	173	11.257	11.252	0.005	97	310948	175.0	183.7	
96 2-Chlorobenzotrifluoride	180	11.324	11.325	-0.001	96	840920	175.0	164.9	
97 Isopropylbenzene	105	11.421	11.422	-0.001	96	2681266	175.0	167.8	
100 Bromobenzene	156	11.737	11.739	-0.002	95	659984	175.0	175.7	
99 1,1,2,2-Tetrachloroethane	83	11.737	11.745	-0.008	94	762601	175.0	159.9	
102 trans-1,4-Dichloro-2-buten	53	11.774	11.775	-0.001	86	199800	175.0	176.4	
101 1,2,3-Trichloropropane	110	11.792	11.793	-0.001	85	255265	175.0	164.7	
103 N-Propylbenzene	120	11.841	11.842	-0.001	97	786064	175.0	183.1	
104 2-Chlorotoluene	126	11.926	11.927	-0.001	97	666236	175.0	179.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.993	11.994	-0.001	96	680717	175.0	168.7	
106 1,3,5-Trimethylbenzene	105	12.029	12.031	-0.002	94	2153457	175.0	175.3	
107 4-Chlorotoluene	126	12.054	12.055	-0.001	95	719035	175.0	179.5	
108 tert-Butylbenzene	119	12.346	12.347	-0.001	93	1844417	175.0	179.6	
110 1,2,4-Trimethylbenzene	105	12.406	12.408	-0.002	97	2182090	175.0	174.8	
111 1,2-dichloro-4-(trifluorom	214	12.455	12.456	-0.001	97	525922	175.0	168.1	
112 sec-Butylbenzene	105	12.571	12.572	-0.001	94	2514051	175.0	175.5	
113 1,3-Dichlorobenzene	146	12.692	12.688	0.004	96	1146674	175.0	170.8	
114 4-Isopropyltoluene	119	12.729	12.730	-0.001	96	2114911	175.0	177.2	
115 1,4-Dichlorobenzene	146	12.796	12.797	-0.001	95	1174377	175.0	170.4	
116 2,4-Dichloro-1-(trifluorom	214	12.826	12.828	-0.002	96	501975	175.0	172.4	
118 2,5-Dichlorobenzotrifluori	214	12.875	12.870	0.005	0	541324	175.0	172.1	
120 n-Butylbenzene	91	13.149	13.150	-0.001	96	1748217	175.0	179.6	
121 1,2-Dichlorobenzene	146	13.161	13.156	0.005	97	1081541	175.0	169.1	
122 1,2-Dibromo-3-Chloropropan	75	13.970	13.971	-0.001	86	125814	175.0	177.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.116	14.117	-0.001	0	2069215	525.0	509.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.548	14.555	-0.007	0	1443949	350.0	344.1	
126 1,2,4-Trichlorobenzene	180	14.828	14.829	-0.001	95	511830	175.0	174.8	
127 Hexachlorobutadiene	225	14.992	14.993	-0.001	98	182711	175.0	170.6	
128 Naphthalene	128	15.101	15.103	-0.002	97	1761559	175.0	176.7	
129 1,2,3-Trichlorobenzene	180	15.345	15.346	-0.001	96	453926	175.0	169.7	
131 2,4,5-Trichlorotoluene	159	16.196	16.198	-0.002	0	235417	175.0	185.2	
130 2,3,6-Trichlorotoluene	159	16.306	16.307	-0.001	97	211883	175.0	179.2	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		350.0	347.1	
S 134 1,2-Dichloroethene, Total	96				0		350.0	347.4	
S 135 1,3-Dichloropropene, Total	1				0		350.0	368.4	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260VOAPRI_00263	Amount Added: 7.00	Units: uL
voaWAcro1stRe_00016	Amount Added: 9.00	Units: uL
voaWVA1stRest_00017	Amount Added: 7.00	Units: uL
voaWEEmix1stR_00009	Amount Added: 7.00	Units: uL
voaW2clev1stR_00013	Amount Added: 7.00	Units: uL
voaWKetmix1st_00004	Amount Added: 7.00	Units: uL
VOA8260SURR_00071	Amount Added: 7.00	Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D10.D

Injection Date: 27-Jul-2017 04:00:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: IC VSTD35

Worklist Smp#: 10

Client ID:

Purge Vol: 5.000 mL

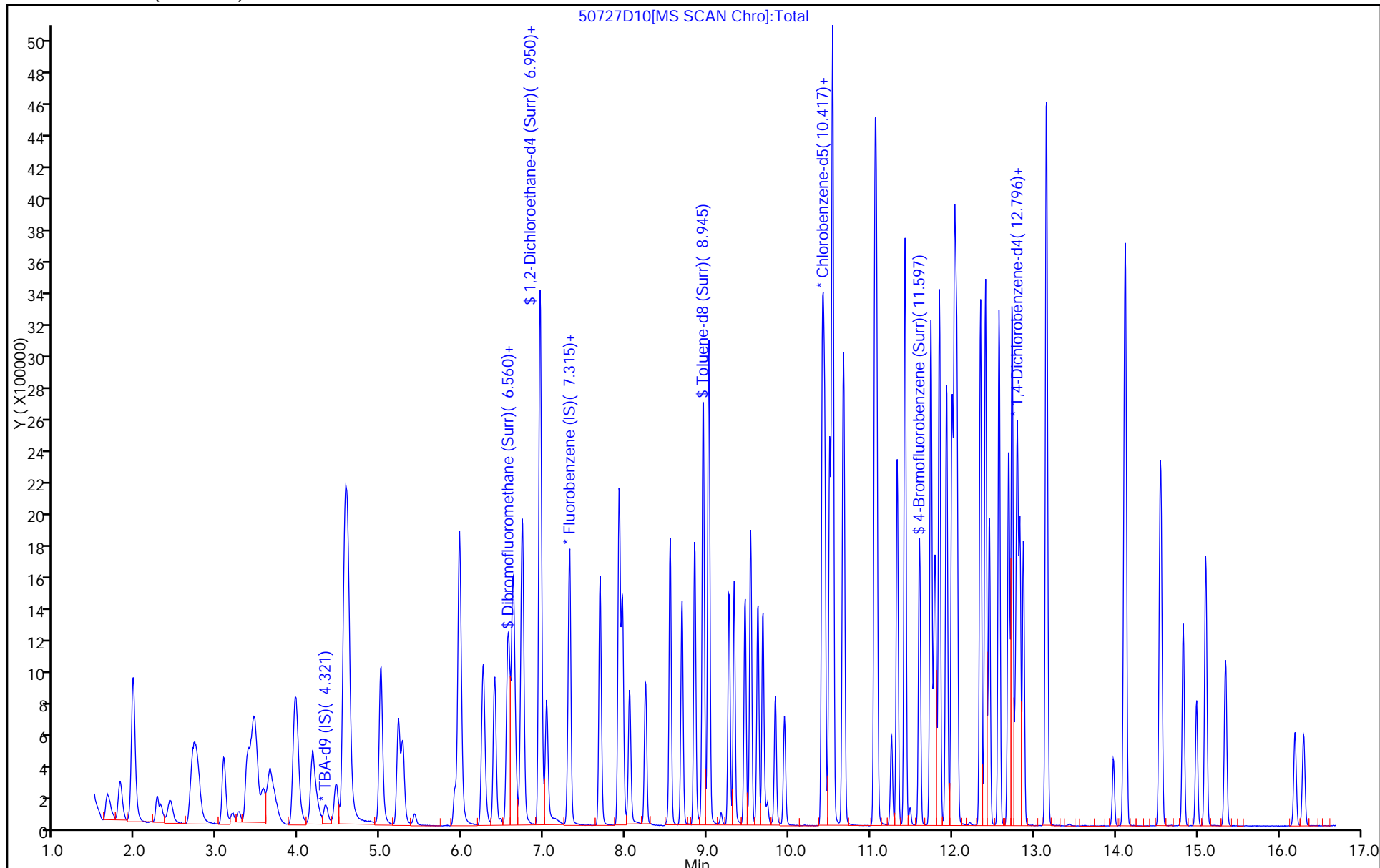
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Lims ID: IC VSTD50  
 Client ID:  
 Sample Type: IC Calib Level: 8  
 Inject. Date: 27-Jul-2017 04:24:30 ALS Bottle#: 11 Worklist Smp#: 11  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-011  
 Misc. Info.: IC VSTD50  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:05:08 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf

Date: 27-Jul-2017 05:09:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.341	4.323	0.018	0	184114	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.297	7.298	-0.001	99	607808	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.406	10.406	0.000	85	161595	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.772	12.773	-0.001	89	194624	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.573	6.574	-0.001	94	681339	250.0	233.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.944	6.945	-0.001	0	795993	250.0	223.2	
\$ 7 Toluene-d8 (Surr)	98	8.946	8.946	0.000	92	2678162	250.0	208.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.598	11.599	-0.001	87	1033645	250.0	222.5	
11 Dichlorodifluoromethane	85	1.652	1.646	0.006	99	857078	250.0	242.5	
12 Chloromethane	50	1.804	1.804	0.000	99	811941	250.0	228.6	
13 Vinyl chloride	62	1.956	1.944	0.012	98	867536	250.0	240.7	
14 Butadiene	39	1.968	1.969	0.000	94	815610	250.0	249.1	
15 Bromomethane	94	2.266	2.254	0.012	90	377950	250.0	221.8	
16 Chloroethane	64	2.406	2.419	-0.013	99	414342	250.0	209.1	
17 Dichlorofluoromethane	67	2.698	2.699	-0.001	97	1057272	250.0	211.0	
18 Trichlorofluoromethane	101	2.728	2.741	-0.013	97	1017488	250.0	229.7	
20 Ethyl ether	59	3.069	3.076	-0.007	88	612640	250.0	212.6	
21 Acrolein	56	3.264	3.252	0.012	98	183852	275.0	253.2	
22 1,1-Dichloroethene	96	3.367	3.368	-0.001	97	745282	250.0	250.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.428	3.441	-0.013	92	774058	250.0	237.0	
24 Acetone	43	3.483	3.477	0.006	100	630881	500.0	396.9	
25 Iodomethane	142	3.580	3.562	0.018	97	1099819	250.0	235.3	
26 Carbon disulfide	76	3.647	3.648	-0.001	99	1856339	250.0	284.2	
28 3-Chloro-1-propene	76	3.939	3.946	-0.007	93	500032	250.0	260.0	
30 Methyl acetate	43	3.976	3.976	0.000	97	1447736	500.0	459.9	
31 Methylene Chloride	84	4.164	4.165	-0.001	88	813282	250.0	232.1	
32 2-Methyl-2-propanol	59	4.468	4.451	0.017	94	568135	2500.0	2609.2	
33 Acrylonitrile	53	4.553	4.554	-0.001	98	3495451	2500.0	2284.0	
34 trans-1,2-Dichloroethene	96	4.578	4.584	-0.006	98	806194	250.0	237.8	
35 Methyl tert-butyl ether	73	4.602	4.603	-0.001	96	2170401	250.0	238.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.991	4.998	-0.007	92	1101558	250.0	253.1	
37 1,1-Dichloroethane	63	5.210	5.217	-0.007	96	1376176	250.0	233.4	
38 Vinyl acetate	43	5.271	5.272	-0.001	97	1523056	250.0	254.0	
44 2,2-Dichloropropane	97	5.959	5.959	0.000	91	188250	250.0	250.8	
45 cis-1,2-Dichloroethene	96	5.959	5.965	-0.006	79	900432	250.0	232.2	
46 2-Butanone (MEK)	43	5.983	5.978	0.005	98	962704	500.0	425.5	
49 Chlorobromomethane	128	6.245	6.245	0.000	94	394763	250.0	229.0	
51 Tetrahydrofuran	42	6.263	6.263	0.000	87	609910	500.0	462.9	
52 Chloroform	83	6.391	6.391	0.000	92	1319564	250.0	224.1	
53 1,1,1-Trichloroethane	97	6.549	6.549	0.000	98	1097196	250.0	246.2	
54 Cyclohexane	56	6.616	6.622	-0.006	90	1394833	250.0	253.7	
56 Carbon tetrachloride	117	6.719	6.726	-0.007	97	923177	250.0	248.9	
55 1,1-Dichloropropene	75	6.737	6.738	-0.001	96	1178056	250.0	244.7	
57 Isobutyl alcohol	41	6.950	6.945	0.005	68	715201	6250.0	5913.6	
58 Benzene	78	6.950	6.951	-0.001	97	3249284	250.0	219.9	
59 1,2-Dichloroethane	62	7.029	7.030	-0.001	97	969148	250.0	225.0	
62 n-Heptane	43	7.309	7.316	-0.007	89	922592	250.0	265.1	
64 Trichloroethene	130	7.686	7.687	-0.001	98	887332	250.0	238.6	
66 Methylcyclohexane	83	7.918	7.918	0.000	87	1432791	250.0	254.8	
67 1,2-Dichloropropane	63	7.960	7.961	-0.001	95	793667	250.0	230.6	
68 Dibromomethane	93	8.045	8.046	-0.001	97	470836	250.0	233.5	
70 1,4-Dioxane	88	8.039	8.052	-0.013	38	187034	5000.0	5344.8	
71 Dichlorobromomethane	83	8.240	8.241	-0.001	100	945026	250.0	238.8	
73 2-Chloroethyl vinyl ether	63	8.544	8.545	-0.001	92	1234429	500.0	498.5	
74 cis-1,3-Dichloropropene	75	8.684	8.685	-0.001	96	1203144	250.0	250.3	
75 4-Methyl-2-pentanone (MIBK)	43	8.842	8.843	-0.001	94	1863520	500.0	449.6	
76 Toluene	91	9.019	9.019	0.000	97	3254284	250.0	202.0	
77 trans-1,3-Dichloropropene	75	9.268	9.269	-0.001	93	1070347	250.0	244.1	
78 Ethyl methacrylate	69	9.329	9.330	-0.001	88	1271580	250.0	240.5	
79 1,1,2-Trichloroethane	97	9.457	9.457	0.000	91	718069	250.0	213.9	
80 Tetrachloroethene	164	9.530	9.530	0.000	97	683462	250.0	222.4	
81 1,3-Dichloropropane	76	9.621	9.615	0.006	89	1320887	250.0	212.9	
82 2-Hexanone	43	9.676	9.682	-0.006	93	1418811	500.0	446.3	
84 Chlorodibromomethane	129	9.834	9.834	0.000	90	672369	250.0	237.0	
85 Ethylene Dibromide	107	9.943	9.944	-0.001	99	773664	250.0	224.7	
86 3-Chlorobenzotrifluoride	180	10.412	10.412	0.000	93	1290067	250.0	232.3	
87 Chlorobenzene	112	10.436	10.437	-0.001	95	2170926	250.0	207.0	
88 4-Chlorobenzotrifluoride	180	10.497	10.498	-0.001	96	1226371	250.0	239.3	
89 1,1,1,2-Tetrachloroethane	131	10.527	10.528	-0.001	94	751692	250.0	225.4	
90 Ethylbenzene	106	10.533	10.534	-0.001	97	1304914	250.0	222.8	
91 m-Xylene & p-Xylene	106	10.667	10.668	-0.001	0	1614353	250.0	225.6	
92 o-Xylene	106	11.051	11.051	0.000	95	1518391	250.0	222.7	
93 Styrene	104	11.069	11.069	0.000	94	2462559	250.0	213.4	
94 Bromoform	173	11.257	11.252	0.005	98	443094	250.0	251.3	
96 2-Chlorobenzotrifluoride	180	11.324	11.325	-0.001	95	1244752	250.0	234.2	
97 Isopropylbenzene	105	11.422	11.422	0.000	96	3502176	250.0	210.4	
100 Bromobenzene	156	11.738	11.739	-0.001	95	889999	250.0	235.6	
99 1,1,2,2-Tetrachloroethane	83	11.738	11.745	-0.007	95	1078742	250.0	217.1	
102 trans-1,4-Dichloro-2-buten	53	11.781	11.775	0.006	84	299994	250.0	263.4	
101 1,2,3-Trichloropropane	110	11.793	11.793	0.000	84	371250	250.0	238.1	
103 N-Propylbenzene	120	11.841	11.842	-0.001	96	1069171	250.0	247.7	
104 2-Chlorotoluene	126	11.927	11.927	0.000	97	907016	250.0	243.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.994	11.994	0.000	96	1010916	250.0	249.1	
106 1,3,5-Trimethylbenzene	105	12.030	12.031	-0.001	95	2828999	250.0	229.0	
107 4-Chlorotoluene	126	12.054	12.055	-0.001	96	970169	250.0	240.8	
108 tert-Butylbenzene	119	12.346	12.347	-0.001	92	2446270	250.0	236.9	
110 1,2,4-Trimethylbenzene	105	12.407	12.408	-0.001	97	2860516	250.0	227.8	
111 1,2-dichloro-4-(trifluorom	214	12.456	12.456	0.000	96	801099	250.0	254.7	
112 sec-Butylbenzene	105	12.571	12.572	-0.001	95	3330508	250.0	231.2	
113 1,3-Dichlorobenzene	146	12.687	12.688	-0.001	96	1545747	250.0	229.0	
114 4-Isopropyltoluene	119	12.730	12.730	0.000	95	2809716	250.0	234.1	
115 1,4-Dichlorobenzene	146	12.797	12.797	0.000	95	1574222	250.0	227.2	
116 2,4-Dichloro-1-(trifluorom	214	12.827	12.828	-0.001	94	771761	250.0	263.5	
118 2,5-Dichlorobenzotrifluori	214	12.870	12.870	0.000	0	797256	250.0	252.0	
120 n-Butylbenzene	91	13.149	13.150	-0.001	95	2372703	250.0	242.4	
121 1,2-Dichlorobenzene	146	13.155	13.156	-0.001	96	1435184	250.0	223.1	
122 1,2-Dibromo-3-Chloropropan	75	13.971	13.971	0.000	86	182290	250.0	255.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.117	14.117	0.000	0	3049908	750.0	747.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.555	14.555	0.000	0	2191624	500.0	519.4	
126 1,2,4-Trichlorobenzene	180	14.828	14.829	-0.001	95	755690	250.0	256.7	
127 Hexachlorobutadiene	225	14.993	14.993	0.000	98	282046	250.0	261.8	
128 Naphthalene	128	15.102	15.103	-0.001	98	2561966	250.0	255.5	
129 1,2,3-Trichlorobenzene	180	15.346	15.346	0.000	96	693791	250.0	258.0	
131 2,4,5-Trichlorotoluene	159	16.197	16.198	-0.001	0	452516	250.0	354.0	
130 2,3,6-Trichlorotoluene	159	16.301	16.307	-0.006	98	417201	250.0	350.8	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		500.0	470.0	
S 133 Xylenes, Total	106				0		500.0	448.3	
S 135 1,3-Dichloropropene, Total	1				0		500.0	494.4	

### QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOA8260VOAPRI_00263	Amount Added: 10.00	Units: uL
voaWAcro1stRe_00016	Amount Added: 11.00	Units: uL
voaWVA1stRest_00017	Amount Added: 10.00	Units: uL
voaWEEmix1stR_00009	Amount Added: 10.00	Units: uL
voaW2clev1stR_00013	Amount Added: 10.00	Units: uL
voaWKetmix1st_00004	Amount Added: 10.00	Units: uL
VOA8260INT_00072	Amount Added: 2.00	Units: uL
VOA8260SURR_00071	Amount Added: 10.00	Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D

Injection Date: 27-Jul-2017 04:24:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: IC VSTD50

Worklist Smp#: 11

Client ID:

Purge Vol: 5.000 mL

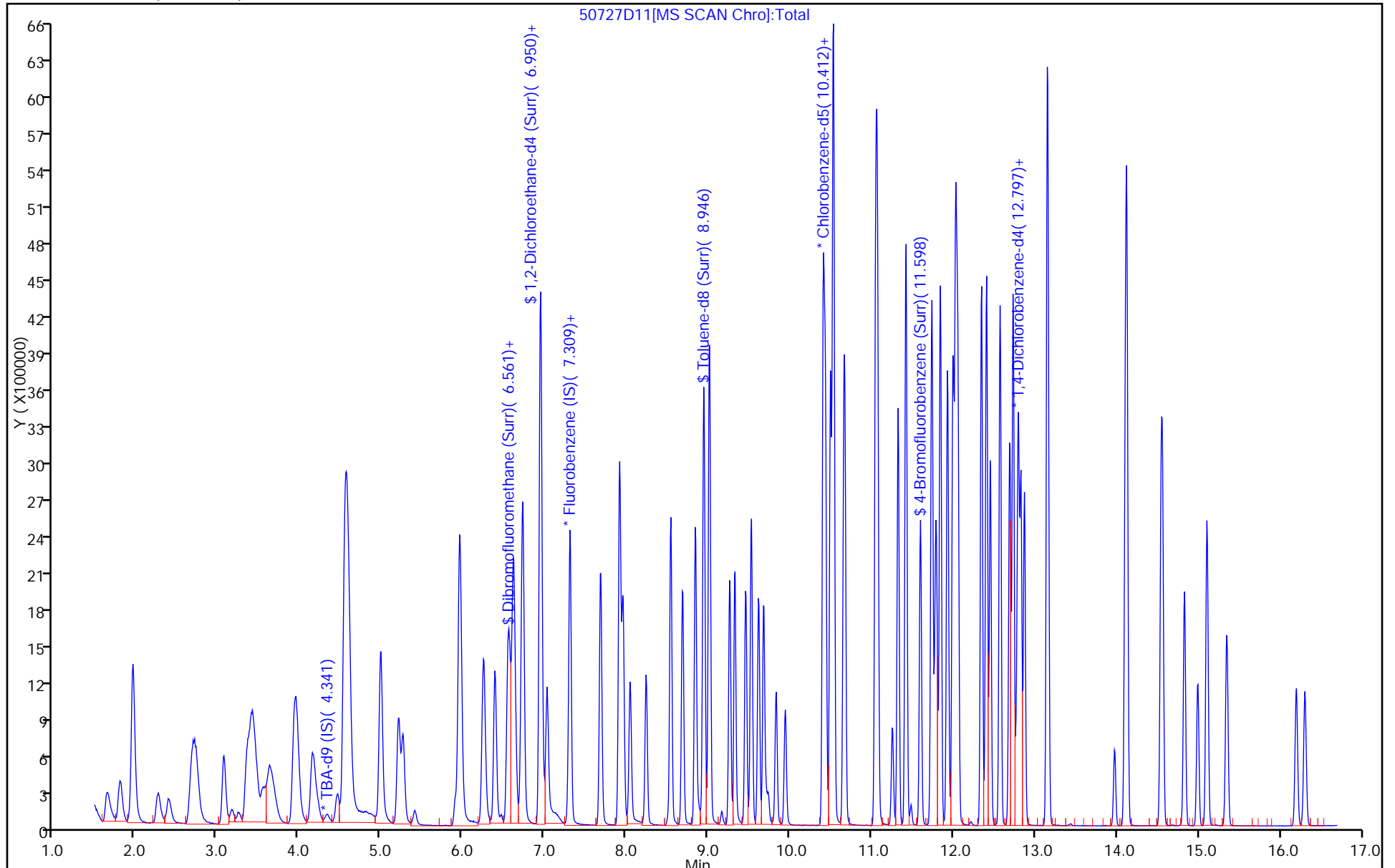
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-226849/2 Calibration Date: 10/24/2017 23:23  
 Instrument ID: CHHP5 Calib Start Date: 07/27/2017 00:51  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/27/2017 04:24  
 Lab File ID: 51024D02.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	0.2907	0.3005	0.1000	10.3	10.0	3.4	20.0
Chloromethane	Ave	0.2922	0.4039	0.1000	13.8	10.0	38.2*	20.0
1,3-Butadiene	Ave	0.2694	0.3908	0.0100	14.5	10.0	45.1*	20.0
Vinyl chloride	Ave	0.2965	0.3321	0.1000	11.2	10.0	12.0	20.0
Bromomethane	Ave	0.1402	0.1197	0.0500	8.53	10.0	-14.7	20.0
Chloroethane	Ave	0.1630	0.1852	0.0500	11.4	10.0	13.6	20.0
Trichlorofluoromethane	Ave	0.3643	0.4401	0.1000	12.1	10.0	20.8*	20.0
Ethyl ether	Ave	0.2370	0.3020	0.0100	12.7	10.0	27.4*	20.0
Acrolein	Ave	0.0597	0.0704	0.0100	35.3	30.0	17.8	20.0
1,1-Dichloroethene	Ave	0.2448	0.2620	0.1000	10.7	10.0	7.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2686	0.2972	0.1000	11.1	10.0	10.6	20.0
Acetone	Ave	0.1308	0.1383	0.0500	21.2	20.0	5.8	20.0
Iodomethane	Ave	0.3845	0.4172	0.0100	10.9	10.0	8.5	20.0
Carbon disulfide	Ave	0.5372	0.5397	0.1000	10.0	10.0	0.5	20.0
Allyl chloride	Ave	0.1582	0.1450	0.0100	9.17	10.0	-8.3	20.0
Methyl acetate	Ave	0.2589	0.3267	0.1000	25.2	20.0	26.2*	20.0
Methylene Chloride	Lin2		0.3025	0.1000	9.97	10.0	-0.3	20.0
tert-Butyl alcohol	Ave	1.183	1.311	0.0100	111	100	10.9	20.0
Acrylonitrile	Ave	0.1259	0.1291	0.0100	103	100	2.5	20.0
trans-1,2-Dichloroethene	Ave	0.2789	0.2672	0.1000	9.58	10.0	-4.2	20.0
Methyl tert-butyl ether	Ave	0.7479	0.6792	0.1000	9.08	10.0	-9.2	20.0
Hexane	Ave	0.3580	0.3661	0.0100	10.2	10.0	2.2	20.0
1,1-Dichloroethane	Ave	0.4850	0.4672	0.2000	9.63	10.0	-3.7	20.0
Vinyl acetate	Ave	0.4932	0.3596	0.0100	7.29	10.0	-27.1*	20.0
2,2-Dichloropropane	Ave	0.0617	0.0690	0.0100	11.2	10.0	11.8	20.0
cis-1,2-Dichloroethene	Ave	0.3190	0.2820	0.1000	8.84	10.0	-11.6	20.0
2-Butanone (MEK)	Ave	0.1861	0.1754	0.0500	18.8	20.0	-5.8	20.0
Bromochloromethane	Ave	0.1418	0.1358	0.0100	9.58	10.0	-4.2	20.0
Tetrahydrofuran	Ave	0.1084	0.0946	0.0100	17.5	20.0	-12.7	20.0
Chloroform	Ave	0.4843	0.4309	0.2000	8.90	10.0	-11.0	20.0
1,1,1-Trichloroethane	Ave	0.3666	0.3458	0.1000	9.43	10.0	-5.7	20.0
Cyclohexane	Ave	0.4524	0.4479	0.1000	9.90	10.0	-1.0	20.0
Carbon tetrachloride	Ave	0.3051	0.2952	0.1000	9.68	10.0	-3.2	20.0
1,1-Dichloropropene	Ave	0.3961	0.3385	0.0100	8.55	10.0	-14.5	20.0
Isobutyl alcohol	Ave	0.0099	0.0100	0.0100	251	250	0.6	20.0
Benzene	Ave	1.216	1.070	0.5000	8.80	10.0	-12.0	20.0
1,2-Dichloroethane	Ave	0.3544	0.3613	0.1000	10.2	10.0	1.9	20.0
n-Heptane	Ave	0.2863	0.3146	0.0100	11.0	10.0	9.9	20.0
Trichloroethene	Ave	0.3059	0.2587	0.2000	8.45	10.0	-15.5	20.0
Methylcyclohexane	Ave	0.4626	0.3662	0.1000	7.92	10.0	-20.8*	20.0



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-226849/2 Calibration Date: 10/24/2017 23:23  
 Instrument ID: CHHP5 Calib Start Date: 07/27/2017 00:51  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/27/2017 04:24  
 Lab File ID: 51024D02.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	0.2831	0.2508	0.1000	8.86	10.0	-11.4	20.0
1,4-Dioxane	Ave	0.0029	0.0024*	0.0100	168	200	-16.1	20.0
Dibromomethane	Ave	0.1659	0.1434	0.0100	8.64	10.0	-13.6	20.0
Bromodichloromethane	Ave	0.3256	0.2903	0.2000	8.92	10.0	-10.8	20.0
2-Chloroethyl vinyl ether	Ave	0.2037	0.1701	0.0100	16.7	20.0	-16.5	20.0
cis-1,3-Dichloropropene	Ave	0.3955	0.3385	0.2000	8.56	10.0	-14.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.282	1.247	0.1000	19.4	20.0	-2.8	20.0
Toluene	Ave	4.986	4.817	0.4000	9.66	10.0	-3.4	20.0
trans-1,3-Dichloropropene	Ave	1.357	1.224	0.1000	9.02	10.0	-9.8	20.0
Ethyl methacrylate	Ave	1.636	1.204	0.0100	7.36	10.0	-26.4*	20.0
1,1,2-Trichloroethane	Ave	1.039	0.9929	0.1000	9.56	10.0	-4.4	20.0
Tetrachloroethene	Ave	0.9508	0.8967	0.2000	9.43	10.0	-5.7	20.0
1,3-Dichloropropane	Ave	1.920	1.705	0.0100	8.88	10.0	-11.2	20.0
2-Hexanone	Ave	0.9836	0.8960	0.1000	18.2	20.0	-8.9	20.0
Dibromochloromethane	Ave	0.8779	0.8359	0.1000	9.52	10.0	-4.8	20.0
1,2-Dibromoethane (EDB)	Ave	1.065	0.9710	0.1000	9.12	10.0	-8.8	20.0
3-Chlorobenzotrifluoride	Ave	1.718	1.807	0.0100	10.5	10.0	5.2	20.0
Chlorobenzene	Ave	3.246	3.059	0.5000	9.42	10.0	-5.8	20.0
4-Chlorobenzotrifluoride	Ave	1.586	1.788	0.0100	11.3	10.0	12.8	20.0
1,1,1,2-Tetrachloroethane	Ave	1.032	1.036	0.0100	10.0	10.0	0.3	20.0
Ethylbenzene	Ave	1.812	1.658	0.1000	9.15	10.0	-8.5	20.0
m-Xylene & p-Xylene	Ave	2.214	2.030	0.1000	9.17	10.0	-8.3	20.0
o-Xylene	Ave	2.110	1.951	0.3000	9.25	10.0	-7.5	20.0
Styrene	Ave	3.571	3.430	0.3000	9.60	10.0	-4.0	20.0
Bromoform	Ave	0.5456	0.4447	0.1000	8.15	10.0	-18.5	20.0
2-Chlorobenzotrifluoride	Ave	1.644	1.770	0.0100	10.8	10.0	7.6	20.0
Isopropylbenzene	Ave	5.150	4.694	0.1000	9.11	10.0	-8.9	20.0
Bromobenzene	Ave	0.9704	0.7976	0.0100	8.22	10.0	-17.8	20.0
1,1,2,2-Tetrachloroethane	Ave	1.538	1.351	0.3000	8.79	10.0	-12.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2926	0.3133	0.0100	10.7	10.0	7.1	20.0
1,2,3-Trichloropropane	Ave	0.4005	0.3281	0.0100	8.19	10.0	-18.1	20.0
N-Propylbenzene	Ave	1.109	0.9869	0.0100	8.90	10.0	-11.0	20.0
2-Chlorotoluene	Ave	0.9585	0.8227	0.0100	8.58	10.0	-14.2	20.0
3-Chlorotoluene	Ave	1.043	1.033	0.0100	9.91	10.0	-0.9	20.0
1,3,5-Trimethylbenzene	Ave	3.173	2.847	0.0100	8.97	10.0	-10.3	20.0
4-Chlorotoluene	Ave	1.035	0.8749	0.0100	8.45	10.0	-15.5	20.0
tert-Butylbenzene	Ave	2.653	2.156	0.0100	8.13	10.0	-18.7	20.0
1,2,4-Trimethylbenzene	Ave	3.226	2.815	0.0100	8.73	10.0	-12.7	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.8081	0.7033	0.0100	8.70	10.0	-13.0	20.0
sec-Butylbenzene	Ave	3.701	3.136	0.0100	8.47	10.0	-15.3	20.0
1,3-Dichlorobenzene	Ave	1.734	1.548	0.6000	8.93	10.0	-10.7	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-226849/2 Calibration Date: 10/24/2017 23:23  
 Instrument ID: CHHP5 Calib Start Date: 07/27/2017 00:51  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/27/2017 04:24  
 Lab File ID: 51024D02.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
4-Isopropyltoluene	Ave	3.083	2.724	0.0100	8.84	10.0	-11.6	20.0
1,4-Dichlorobenzene	Ave	1.780	1.652	0.5000	9.28	10.0	-7.2	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7524	0.6469	0.0100	8.60	10.0	-14.0	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.8127	0.7462	0.0100	9.18	10.0	-8.2	20.0
n-Butylbenzene	Ave	2.514	2.117	0.0100	8.42	10.0	-15.8	20.0
1,2-Dichlorobenzene	Ave	1.653	1.498	0.4000	9.06	10.0	-9.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1835	0.1402	0.0500	7.64	10.0	-23.6*	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	1.048	1.077	0.0100	30.8	30.0	2.7	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.084	1.096	0.0100	20.2	20.0	1.1	20.0
1,2,4-Trichlorobenzene	Ave	0.7563	0.6600	0.2000	8.73	10.0	-12.7	20.0
Hexachlorobutadiene	Ave	0.2767	0.2397	0.0100	8.66	10.0	-13.4	20.0
Naphthalene	Ave	2.576	2.167	0.0100	8.41	10.0	-15.9	20.0
1,2,3-Trichlorobenzene	Ave	0.6909	0.6154	0.0100	8.91	10.0	-10.9	20.0
2,4,5-Trichlorotoluene	Ave	0.3284	0.3032	0.0100	9.23	10.0	-7.7	20.0
2,3,6-Trichlorotoluene	Ave	0.3055	0.3115	0.0100	10.2	10.0	2.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2406	0.2093		8.70	10.0	-13.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2934	0.2841		9.68	10.0	-3.2	20.0
Toluene-d8 (Surr)	Ave	3.979	3.842		9.66	10.0	-3.4	20.0
4-Bromofluorobenzene (Surr)	Ave	1.437	1.280		8.91	10.0	-10.9	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D02.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 24-Oct-2017 23:23:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-002  
 Misc. Info.: CCVIS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 21:04:29 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 24-Oct-2017 23:58:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.376	4.376	0.000	0	164866	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.331	7.331	0.000	99	468486	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.427	10.427	0.000	86	111929	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.768	12.768	0.000	96	172751	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.614	6.614	0.000	92	98047	50.0	43.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.985	6.985	0.000	0	133114	50.0	48.4	
\$ 7 Toluene-d8 (Surr)	98	8.979	8.979	0.000	93	430077	50.0	48.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.613	11.613	0.000	88	143251	50.0	44.5	
11 Dichlorodifluoromethane	85	1.670	1.670	0.000	98	140787	50.0	51.7	
12 Chloromethane	50	1.895	1.895	0.000	99	189234	50.0	69.1	
14 Butadiene	39	2.010	2.010	0.000	94	183078	50.0	72.5	
13 Vinyl chloride	62	2.010	2.010	0.000	58	155605	50.0	56.0	
15 Bromomethane	94	2.332	2.332	0.000	91	56059	50.0	42.7	
16 Chloroethane	64	2.436	2.436	0.000	99	86745	50.0	56.8	
17 Dichlorofluoromethane	67	2.752	2.752	0.000	97	237482	50.0	61.5	
18 Trichlorofluoromethane	101	2.795	2.795	0.000	98	206201	50.0	60.4	
20 Ethyl ether	59	3.123	3.123	0.000	94	141477	50.0	63.7	
21 Acrolein	56	3.312	3.312	0.000	100	98895	150.0	176.7	
22 1,1-Dichloroethene	96	3.409	3.409	0.000	97	122741	50.0	53.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.494	3.494	0.000	93	139245	50.0	55.3	
24 Acetone	43	3.530	3.530	0.000	99	129607	100.0	105.8	
25 Iodomethane	142	3.610	3.610	0.000	97	195451	50.0	54.3	
26 Carbon disulfide	76	3.701	3.701	0.000	100	252837	50.0	50.2	
28 3-Chloro-1-propene	76	3.999	3.999	0.000	89	67923	50.0	45.8	
30 Methyl acetate	43	4.029	4.029	0.000	99	306090	100.0	126.2	
31 Methylene Chloride	84	4.230	4.230	0.000	97	141697	50.0	49.9	
32 2-Methyl-2-propanol	59	4.510	4.510	0.000	92	108082	500.0	554.3	
33 Acrylonitrile	53	4.607	4.607	0.000	100	604696	500.0	512.6	
34 trans-1,2-Dichloroethene	96	4.631	4.631	0.000	99	125181	50.0	47.9	
35 Methyl tert-butyl ether	73	4.656	4.656	0.000	97	318180	50.0	45.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.057	5.057	0.000	95	171493	50.0	51.1	
37 1,1-Dichloroethane	63	5.264	5.264	0.000	97	218853	50.0	48.2	
38 Vinyl acetate	43	5.318	5.318	0.000	97	168468	50.0	36.5	
44 2,2-Dichloropropane	97	6.000	6.000	0.000	65	32341	50.0	55.9	
45 cis-1,2-Dichloroethene	96	6.006	6.006	0.000	82	132127	50.0	44.2	
46 2-Butanone (MEK)	43	6.024	6.024	0.000	100	164317	100.0	94.2	
49 Chlorobromomethane	128	6.291	6.291	0.000	96	63619	50.0	47.9	
51 Tetrahydrofuran	42	6.310	6.310	0.000	93	88679	100.0	87.3	
52 Chloroform	83	6.437	6.437	0.000	93	201869	50.0	44.5	
53 1,1,1-Trichloroethane	97	6.589	6.589	0.000	97	161979	50.0	47.2	
54 Cyclohexane	56	6.662	6.662	0.000	95	209819	50.0	49.5	
56 Carbon tetrachloride	117	6.766	6.766	0.000	96	138285	50.0	48.4	
55 1,1-Dichloropropene	75	6.778	6.778	0.000	92	158565	50.0	42.7	
57 Isobutyl alcohol	41	6.985	6.985	0.000	89	117203	1250.0	1257.3	
58 Benzene	78	6.997	6.997	0.000	98	501385	50.0	44.0	
59 1,2-Dichloroethane	62	7.070	7.070	0.000	97	169252	50.0	51.0	
62 n-Heptane	43	7.350	7.350	0.000	93	147377	50.0	54.9	
64 Trichloroethene	130	7.721	7.721	0.000	96	121173	50.0	42.3	
66 Methylcyclohexane	83	7.958	7.958	0.000	93	171550	50.0	39.6	
67 1,2-Dichloropropane	63	7.994	7.994	0.000	95	117481	50.0	44.3	
68 Dibromomethane	93	8.079	8.079	0.000	96	67175	50.0	43.2	
70 1,4-Dioxane	88	8.079	8.079	0.000	46	22635	1000.0	839.2	
71 Dichlorobromomethane	83	8.274	8.274	0.000	98	135998	50.0	44.6	
73 2-Chloroethyl vinyl ether	63	8.578	8.578	0.000	93	159385	100.0	83.5	
74 cis-1,3-Dichloropropene	75	8.718	8.718	0.000	93	158560	50.0	42.8	
75 4-Methyl-2-pentanone (MIBK)	43	8.870	8.870	0.000	98	279124	100.0	97.2	
76 Toluene	91	9.046	9.046	0.000	99	539176	50.0	48.3	
77 trans-1,3-Dichloropropene	75	9.290	9.290	0.000	96	136987	50.0	45.1	
78 Ethyl methacrylate	69	9.356	9.356	0.000	94	134764	50.0	36.8	
79 1,1,2-Trichloroethane	97	9.490	9.490	0.000	92	111137	50.0	47.8	
80 Tetrachloroethene	164	9.557	9.557	0.000	96	100365	50.0	47.2	
81 1,3-Dichloropropane	76	9.642	9.642	0.000	97	190823	50.0	44.4	
82 2-Hexanone	43	9.703	9.703	0.000	98	200578	100.0	91.1	
84 Chlorodibromomethane	129	9.855	9.855	0.000	90	93565	50.0	47.6	
85 Ethylene Dibromide	107	9.971	9.971	0.000	98	108687	50.0	45.6	
86 3-Chlorobenzotrifluoride	180	10.433	10.433	0.000	90	202266	50.0	52.6	
87 Chlorobenzene	112	10.457	10.457	0.000	94	342377	50.0	47.1	
88 4-Chlorobenzotrifluoride	180	10.518	10.518	0.000	96	200136	50.0	56.4	
89 1,1,1,2-Tetrachloroethane	131	10.548	10.548	0.000	93	115911	50.0	50.2	
90 Ethylbenzene	106	10.561	10.561	0.000	99	185593	50.0	45.8	
91 m-Xylene & p-Xylene	106	10.688	10.688	0.000	0	227214	50.0	45.8	
92 o-Xylene	106	11.071	11.071	0.000	95	218380	50.0	46.2	
93 Styrene	104	11.090	11.090	0.000	96	383882	50.0	48.0	
94 Bromoform	173	11.272	11.272	0.000	94	49779	50.0	40.8	
96 2-Chlorobenzotrifluoride	180	11.339	11.339	0.000	96	198085	50.0	53.8	
97 Isopropylbenzene	105	11.436	11.436	0.000	96	525373	50.0	45.6	
100 Bromobenzene	156	11.746	11.746	0.000	94	137786	50.0	41.1	
99 1,1,2,2-Tetrachloroethane	83	11.752	11.752	0.000	83	151258	50.0	43.9	
102 trans-1,4-Dichloro-2-buten	53	11.789	11.789	0.000	69	54117	50.0	53.5	
101 1,2,3-Trichloropropane	110	11.807	11.807	0.000	86	56677	50.0	41.0	
103 N-Propylbenzene	120	11.850	11.850	0.000	98	170483	50.0	44.5	
104 2-Chlorotoluene	126	11.935	11.935	0.000	97	142117	50.0	42.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	12.002	12.002	0.000	97	178500	50.0	49.6	
106 1,3,5-Trimethylbenzene	105	12.038	12.038	0.000	94	491765	50.0	44.9	
107 4-Chlorotoluene	126	12.063	12.063	0.000	97	151146	50.0	42.3	
108 tert-Butylbenzene	119	12.348	12.348	0.000	94	372428	50.0	40.6	
110 1,2,4-Trimethylbenzene	105	12.409	12.409	0.000	96	486215	50.0	43.6	
111 1,2-dichloro-4-(trifluorom	214	12.452	12.452	0.000	93	121494	50.0	43.5	
112 sec-Butylbenzene	105	12.573	12.573	0.000	94	541690	50.0	42.4	
113 1,3-Dichlorobenzene	146	12.689	12.689	0.000	97	267393	50.0	44.6	
114 4-Isopropyltoluene	119	12.732	12.732	0.000	97	470576	50.0	44.2	
115 1,4-Dichlorobenzene	146	12.798	12.798	0.000	96	285311	50.0	46.4	
116 2,4-Dichloro-1-(trifluorom	214	12.823	12.823	0.000	91	111755	50.0	43.0	
118 2,5-Dichlorobenzotrifluori	214	12.865	12.865	0.000	0	128911	50.0	45.9	
120 n-Butylbenzene	91	13.139	13.139	0.000	98	365658	50.0	42.1	
121 1,2-Dichlorobenzene	146	13.151	13.151	0.000	97	258792	50.0	45.3	
122 1,2-Dibromo-3-Chloropropan	75	13.936	13.936	0.000	75	24222	50.0	38.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.088	14.088	0.000	0	558059	150.0	154.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.501	14.501	0.000	0	378752	100.0	101.1	
126 1,2,4-Trichlorobenzene	180	14.763	14.763	0.000	95	114017	50.0	43.6	
127 Hexachlorobutadiene	225	14.909	14.909	0.000	93	41415	50.0	43.3	
128 Naphthalene	128	15.030	15.030	0.000	97	374334	50.0	42.1	
129 1,2,3-Trichlorobenzene	180	15.255	15.255	0.000	97	106305	50.0	44.5	
131 2,4,5-Trichlorotoluene	159	16.028	16.028	0.000	0	52379	50.0	46.2	
130 2,3,6-Trichlorotoluene	159	16.119	16.119	0.000	95	53816	50.0	51.0	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	92.1	
S 133 Xylenes, Total	106				0		100.0	92.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	87.9	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWEEmix1stR_00014	Amount Added: 2.00	Units: uL	
voaWKetmix1st_00006	Amount Added: 2.00	Units: uL	
voaWVA1stRest_00021	Amount Added: 2.00	Units: uL	
voaWAcro1stRe_00021	Amount Added: 6.00	Units: uL	
VOA8260VOAPRI_00268	Amount Added: 2.00	Units: uL	
voaW2clev1stR_00023	Amount Added: 2.00	Units: uL	
VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D02.D

Injection Date: 24-Oct-2017 23:23:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

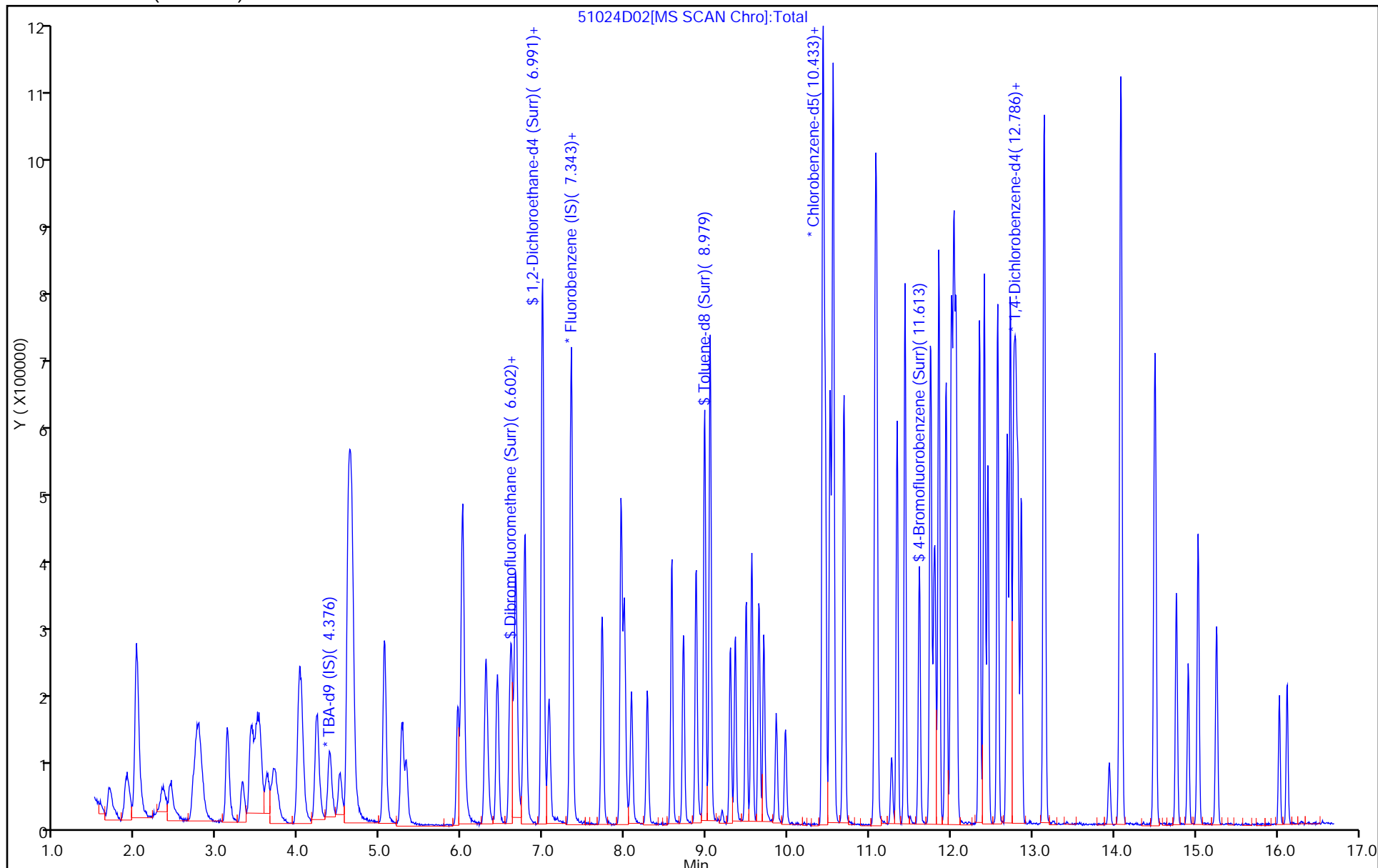
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-227010/2 Calibration Date: 10/25/2017 22:12  
 Instrument ID: CHHP5 Calib Start Date: 07/27/2017 00:51  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/27/2017 04:24  
 Lab File ID: 51025D02.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	0.2907	0.3105	0.1000	10.7	10.0	6.8	20.0
Chloromethane	Ave	0.2922	0.3504	0.1000	12.0	10.0	19.9	20.0
1,3-Butadiene	Ave	0.2694	0.3536	0.0100	13.1	10.0	31.3*	20.0
Vinyl chloride	Ave	0.2965	0.3003	0.1000	10.1	10.0	1.3	20.0
Bromomethane	Ave	0.1402	0.1012	0.0500	7.22	10.0	-27.8*	20.0
Chloroethane	Ave	0.1630	0.1494	0.0500	9.17	10.0	-8.3	20.0
Trichlorofluoromethane	Ave	0.3643	0.3868	0.1000	10.6	10.0	6.2	20.0
Ethyl ether	Ave	0.2370	0.2681	0.0100	11.3	10.0	13.1	20.0
Acrolein	Ave	0.0597	0.0674	0.0100	33.9	30.0	12.9	20.0
1,1-Dichloroethene	Ave	0.2448	0.2455	0.1000	10.0	10.0	0.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2686	0.2578	0.1000	9.60	10.0	-4.0	20.0
Acetone	Ave	0.1308	0.1562	0.0500	23.9	20.0	19.4	20.0
Iodomethane	Ave	0.3845	0.3715	0.0100	9.66	10.0	-3.4	20.0
Carbon disulfide	Ave	0.5372	0.4722	0.1000	8.79	10.0	-12.1	20.0
Allyl chloride	Ave	0.1582	0.1370	0.0100	8.66	10.0	-13.4	20.0
Methyl acetate	Ave	0.2589	0.2804	0.1000	21.7	20.0	8.3	20.0
Methylene Chloride	Lin2		0.2745	0.1000	8.99	10.0	-10.1	20.0
tert-Butyl alcohol	Ave	1.183	1.340	0.0100	113	100	13.3	20.0
Acrylonitrile	Ave	0.1259	0.1282	0.0100	102	100	1.8	20.0
trans-1,2-Dichloroethene	Ave	0.2789	0.2487	0.1000	8.92	10.0	-10.8	20.0
Methyl tert-butyl ether	Ave	0.7479	0.6550	0.1000	8.76	10.0	-12.4	20.0
Hexane	Ave	0.3580	0.3693	0.0100	10.3	10.0	3.1	20.0
1,1-Dichloroethane	Ave	0.4850	0.4638	0.2000	9.56	10.0	-4.4	20.0
Vinyl acetate	Ave	0.4932	0.5407	0.0100	11.0	10.0	9.6	20.0
2,2-Dichloropropane	Ave	0.0617	0.0615	0.0100	9.97	10.0	-0.3	20.0
cis-1,2-Dichloroethene	Ave	0.3190	0.2777	0.1000	8.71	10.0	-12.9	20.0
2-Butanone (MEK)	Ave	0.1861	0.2039	0.0500	21.9	20.0	9.5	20.0
Bromochloromethane	Ave	0.1418	0.1266	0.0100	8.92	10.0	-10.8	20.0
Tetrahydrofuran	Ave	0.1084	0.1025	0.0100	18.9	20.0	-5.5	20.0
Chloroform	Ave	0.4843	0.4254	0.2000	8.78	10.0	-12.2	20.0
1,1,1-Trichloroethane	Ave	0.3666	0.3401	0.1000	9.28	10.0	-7.2	20.0
Cyclohexane	Ave	0.4524	0.4682	0.1000	10.4	10.0	3.5	20.0
Carbon tetrachloride	Ave	0.3051	0.2820	0.1000	9.24	10.0	-7.6	20.0
1,1-Dichloropropene	Ave	0.3961	0.3355	0.0100	8.47	10.0	-15.3	20.0
Isobutyl alcohol	Ave	0.0099	0.0110	0.0100	276	250	10.3	20.0
Benzene	Ave	1.216	1.066	0.5000	8.77	10.0	-12.3	20.0
1,2-Dichloroethane	Ave	0.3544	0.3541	0.1000	9.99	10.0	-0.0	20.0
n-Heptane	Ave	0.2863	0.3257	0.0100	11.4	10.0	13.8	20.0
Trichloroethene	Ave	0.3059	0.2541	0.2000	8.31	10.0	-16.9	20.0
Methylcyclohexane	Ave	0.4626	0.3661	0.1000	7.91	10.0	-20.9*	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-227010/2 Calibration Date: 10/25/2017 22:12  
 Instrument ID: CHHP5 Calib Start Date: 07/27/2017 00:51  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/27/2017 04:24  
 Lab File ID: 51025D02.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	0.2831	0.2552	0.1000	9.01	10.0	-9.9	20.0
1,4-Dioxane	Ave	0.0029	0.0027*	0.0100	189	200	-5.7	20.0
Dibromomethane	Ave	0.1659	0.1385	0.0100	8.35	10.0	-16.5	20.0
Bromodichloromethane	Ave	0.3256	0.2614	0.2000	8.03	10.0	-19.7	20.0
2-Chloroethyl vinyl ether	Ave	0.2037	0.1643	0.0100	16.1	20.0	-19.4	20.0
cis-1,3-Dichloropropene	Ave	0.3955	0.3176	0.2000	8.03	10.0	-19.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.282	1.446	0.1000	22.5	20.0	12.7	20.0
Toluene	Ave	4.986	4.996	0.4000	10.0	10.0	0.2	20.0
trans-1,3-Dichloropropene	Ave	1.357	1.289	0.1000	9.50	10.0	-5.0	20.0
Ethyl methacrylate	Ave	1.636	1.283	0.0100	7.84	10.0	-21.6*	20.0
1,1,2-Trichloroethane	Ave	1.039	1.026	0.1000	9.88	10.0	-1.2	20.0
Tetrachloroethene	Ave	0.9508	0.8933	0.2000	9.40	10.0	-6.0	20.0
1,3-Dichloropropane	Ave	1.920	1.748	0.0100	9.10	10.0	-9.0	20.0
2-Hexanone	Ave	0.9836	1.071	0.1000	21.8	20.0	8.9	20.0
Dibromochloromethane	Ave	0.8779	0.8193	0.1000	9.33	10.0	-6.7	20.0
1,2-Dibromoethane (EDB)	Ave	1.065	0.9552	0.1000	8.97	10.0	-10.3	20.0
3-Chlorobenzotrifluoride	Ave	1.718	1.827	0.0100	10.6	10.0	6.3	20.0
Chlorobenzene	Ave	3.246	3.068	0.5000	9.45	10.0	-5.5	20.0
4-Chlorobenzotrifluoride	Ave	1.586	1.753	0.0100	11.1	10.0	10.6	20.0
1,1,1,2-Tetrachloroethane	Ave	1.032	1.004	0.0100	9.73	10.0	-2.7	20.0
Ethylbenzene	Ave	1.812	1.687	0.1000	9.31	10.0	-6.9	20.0
m-Xylene & p-Xylene	Ave	2.214	2.119	0.1000	9.57	10.0	-4.3	20.0
o-Xylene	Ave	2.110	1.948	0.3000	9.23	10.0	-7.7	20.0
Styrene	Ave	3.571	3.393	0.3000	9.50	10.0	-5.0	20.0
Bromoform	Ave	0.5456	0.4504	0.1000	8.26	10.0	-17.4	20.0
2-Chlorobenzotrifluoride	Ave	1.644	1.751	0.0100	10.7	10.0	6.5	20.0
Isopropylbenzene	Ave	5.150	4.707	0.1000	9.14	10.0	-8.6	20.0
1,1,2,2-Tetrachloroethane	Ave	1.538	1.343	0.3000	8.74	10.0	-12.6	20.0
Bromobenzene	Ave	0.9704	0.8234	0.0100	8.48	10.0	-15.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2926	0.3069	0.0100	10.5	10.0	4.9	20.0
1,2,3-Trichloropropane	Ave	0.4005	0.3315	0.0100	8.28	10.0	-17.2	20.0
N-Propylbenzene	Ave	1.109	0.9395	0.0100	8.47	10.0	-15.3	20.0
2-Chlorotoluene	Ave	0.9585	0.7985	0.0100	8.33	10.0	-16.7	20.0
3-Chlorotoluene	Ave	1.043	1.019	0.0100	9.77	10.0	-2.3	20.0
1,3,5-Trimethylbenzene	Ave	3.173	2.857	0.0100	9.01	10.0	-9.9	20.0
4-Chlorotoluene	Ave	1.035	0.9094	0.0100	8.79	10.0	-12.1	20.0
tert-Butylbenzene	Ave	2.653	2.134	0.0100	8.04	10.0	-19.6	20.0
1,2,4-Trimethylbenzene	Ave	3.226	2.807	0.0100	8.70	10.0	-13.0	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.8081	0.7257	0.0100	8.98	10.0	-10.2	20.0
sec-Butylbenzene	Ave	3.701	3.126	0.0100	8.45	10.0	-15.5	20.0
1,3-Dichlorobenzene	Ave	1.734	1.548	0.6000	8.93	10.0	-10.7	20.0



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-227010/2 Calibration Date: 10/25/2017 22:12  
 Instrument ID: CHHP5 Calib Start Date: 07/27/2017 00:51  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/27/2017 04:24  
 Lab File ID: 51025D02.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
4-Isopropyltoluene	Ave	3.083	2.728	0.0100	8.85	10.0	-11.5	20.0
1,4-Dichlorobenzene	Ave	1.780	1.628	0.5000	9.14	10.0	-8.6	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7524	0.6947	0.0100	9.23	10.0	-7.7	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.8127	0.7485	0.0100	9.21	10.0	-7.9	20.0
n-Butylbenzene	Ave	2.514	2.119	0.0100	8.43	10.0	-15.7	20.0
1,2-Dichlorobenzene	Ave	1.653	1.533	0.4000	9.27	10.0	-7.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1835	0.1401	0.0500	7.63	10.0	-23.7*	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	1.048	1.113	0.0100	31.9	30.0	6.2	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.084	1.124	0.0100	20.7	20.0	3.7	20.0
1,2,4-Trichlorobenzene	Ave	0.7563	0.6689	0.2000	8.84	10.0	-11.6	20.0
Hexachlorobutadiene	Ave	0.2767	0.2540	0.0100	9.18	10.0	-8.2	20.0
Naphthalene	Ave	2.576	2.175	0.0100	8.44	10.0	-15.6	20.0
1,2,3-Trichlorobenzene	Ave	0.6909	0.5939	0.0100	8.60	10.0	-14.0	20.0
2,4,5-Trichlorotoluene	Ave	0.3284	0.2942	0.0100	8.96	10.0	-10.4	20.0
2,3,6-Trichlorotoluene	Ave	0.3055	0.2984	0.0100	9.77	10.0	-2.3	20.0
Dibromofluoromethane (Surr)	Ave	0.2406	0.2130		8.85	10.0	-11.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2934	0.2715		9.25	10.0	-7.5	20.0
Toluene-d8 (Surr)	Ave	3.979	3.933		9.88	10.0	-1.2	20.0
4-Bromofluorobenzene (Surr)	Ave	1.437	1.342		9.34	10.0	-6.6	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D02.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 25-Oct-2017 22:12:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-002  
 Misc. Info.: CCVIS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub12  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 25-Oct-2017 22:48:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.384	4.384	0.000	0	183590	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.340	7.340	0.000	97	526834	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.429	10.429	0.000	88	114566	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.770	12.770	0.000	93	166995	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.610	6.610	0.000	92	112223	50.0	44.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.987	6.987	0.000	0	143045	50.0	46.3	
\$ 7 Toluene-d8 (Surr)	98	8.982	8.982	0.000	93	450550	50.0	49.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.609	11.609	0.000	86	153779	50.0	46.7	
11 Dichlorodifluoromethane	85	1.684	1.684	0.000	99	163567	50.0	53.4	
12 Chloromethane	50	1.891	1.891	0.000	99	184618	50.0	60.0	
14 Butadiene	39	2.012	2.012	0.000	92	186292	50.0	65.6	
13 Vinyl chloride	62	2.012	2.012	0.000	64	158219	50.0	50.6	
15 Bromomethane	94	2.335	2.335	0.000	91	53328	50.0	36.1	M
16 Chloroethane	64	2.426	2.426	0.000	95	78732	50.0	45.8	
17 Dichlorofluoromethane	67	2.760	2.760	0.000	98	232206	50.0	53.5	
18 Trichlorofluoromethane	101	2.791	2.791	0.000	48	203767	50.0	53.1	M
20 Ethyl ether	59	3.131	3.131	0.000	95	141225	50.0	56.6	
21 Acrolein	56	3.314	3.314	0.000	100	106594	150.0	169.4	
22 1,1-Dichloroethene	96	3.411	3.411	0.000	97	129330	50.0	50.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.496	3.496	0.000	92	135794	50.0	48.0	
24 Acetone	43	3.539	3.539	0.000	99	164548	100.0	119.4	
25 Iodomethane	142	3.612	3.612	0.000	95	195718	50.0	48.3	
26 Carbon disulfide	76	3.703	3.703	0.000	100	248750	50.0	43.9	
28 3-Chloro-1-propene	76	4.001	4.001	0.000	90	72163	50.0	43.3	
30 Methyl acetate	43	4.038	4.038	0.000	99	295408	100.0	108.3	
31 Methylene Chloride	84	4.226	4.226	0.000	98	144603	50.0	44.9	
32 2-Methyl-2-propanol	59	4.506	4.506	0.000	92	123013	500.0	566.6	
33 Acrylonitrile	53	4.609	4.609	0.000	100	675445	500.0	509.2	
34 trans-1,2-Dichloroethene	96	4.640	4.640	0.000	98	131046	50.0	44.6	
35 Methyl tert-butyl ether	73	4.664	4.664	0.000	96	345069	50.0	43.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.053	5.053	0.000	94	194539	50.0	51.6	
37 1,1-Dichloroethane	63	5.266	5.266	0.000	96	244353	50.0	47.8	
38 Vinyl acetate	43	5.321	5.321	0.000	97	284835	50.0	54.8	
44 2,2-Dichloropropane	97	6.008	6.008	0.000	60	32416	50.0	49.8	
45 cis-1,2-Dichloroethene	96	6.008	6.008	0.000	82	146306	50.0	43.5	
46 2-Butanone (MEK)	43	6.026	6.026	0.000	99	214823	100.0	109.5	
49 Chlorobromomethane	128	6.288	6.288	0.000	96	66670	50.0	44.6	
51 Tetrahydrofuran	42	6.306	6.306	0.000	91	107968	100.0	94.5	
52 Chloroform	83	6.434	6.434	0.000	94	224088	50.0	43.9	
53 1,1,1-Trichloroethane	97	6.592	6.592	0.000	98	179160	50.0	46.4	
54 Cyclohexane	56	6.659	6.659	0.000	94	246685	50.0	51.8	
56 Carbon tetrachloride	117	6.762	6.762	0.000	97	148565	50.0	46.2	
55 1,1-Dichloropropene	75	6.780	6.780	0.000	93	176730	50.0	42.4	
57 Isobutyl alcohol	41	6.987	6.987	0.000	85	144501	1250.0	1378.4	
58 Benzene	78	6.993	6.993	0.000	97	561851	50.0	43.9	
59 1,2-Dichloroethane	62	7.072	7.072	0.000	97	186540	50.0	50.0	
62 n-Heptane	43	7.352	7.352	0.000	92	171591	50.0	56.9	
64 Trichloroethene	130	7.723	7.723	0.000	97	133890	50.0	41.5	
66 Methylcyclohexane	83	7.960	7.960	0.000	93	192890	50.0	39.6	
67 1,2-Dichloropropane	63	7.997	7.997	0.000	94	134442	50.0	45.1	
70 1,4-Dioxane	88	8.082	8.082	0.000	48	28599	1000.0	942.9	
68 Dibromomethane	93	8.088	8.088	0.000	97	72953	50.0	41.7	
71 Dichlorobromomethane	83	8.276	8.276	0.000	98	137719	50.0	40.1	
73 2-Chloroethyl vinyl ether	63	8.574	8.574	0.000	92	173063	100.0	80.6	
74 cis-1,3-Dichloropropene	75	8.720	8.720	0.000	93	167318	50.0	40.2	
75 4-Methyl-2-pentanone (MIBK)	43	8.872	8.872	0.000	99	331261	100.0	112.7	
76 Toluene	91	9.049	9.049	0.000	98	572317	50.0	50.1	
77 trans-1,3-Dichloropropene	75	9.298	9.298	0.000	96	147724	50.0	47.5	
78 Ethyl methacrylate	69	9.353	9.353	0.000	93	146975	50.0	39.2	
79 1,1,2-Trichloroethane	97	9.486	9.486	0.000	91	117536	50.0	49.4	
80 Tetrachloroethene	164	9.559	9.559	0.000	96	102343	50.0	47.0	
81 1,3-Dichloropropane	76	9.645	9.645	0.000	97	200256	50.0	45.5	
82 2-Hexanone	43	9.705	9.705	0.000	99	245497	100.0	108.9	
84 Chlorodibromomethane	129	9.857	9.857	0.000	89	93868	50.0	46.7	
85 Ethylene Dibromide	107	9.967	9.967	0.000	97	109430	50.0	44.8	
86 3-Chlorobenzotrifluoride	180	10.435	10.435	0.000	88	209316	50.0	53.2	
87 Chlorobenzene	112	10.459	10.459	0.000	94	351440	50.0	47.3	
88 4-Chlorobenzotrifluoride	180	10.520	10.520	0.000	96	200811	50.0	55.3	
89 1,1,1,2-Tetrachloroethane	131	10.551	10.551	0.000	93	115032	50.0	48.6	
90 Ethylbenzene	106	10.557	10.557	0.000	99	193257	50.0	46.6	
91 m-Xylene & p-Xylene	106	10.684	10.684	0.000	0	242762	50.0	47.9	
92 o-Xylene	106	11.068	11.068	0.000	96	223188	50.0	46.2	
93 Styrene	104	11.092	11.092	0.000	95	388706	50.0	47.5	
94 Bromoform	173	11.274	11.274	0.000	96	51605	50.0	41.3	
96 2-Chlorobenzotrifluoride	180	11.341	11.341	0.000	95	200645	50.0	53.3	
97 Isopropylbenzene	105	11.439	11.439	0.000	96	539209	50.0	45.7	
100 Bromobenzene	156	11.749	11.749	0.000	96	137507	50.0	42.4	
99 1,1,2,2-Tetrachloroethane	83	11.749	11.749	0.000	83	153909	50.0	43.7	
102 trans-1,4-Dichloro-2-buten	53	11.785	11.785	0.000	82	51256	50.0	52.4	
101 1,2,3-Trichloropropane	110	11.803	11.803	0.000	85	55364	50.0	41.4	
103 N-Propylbenzene	120	11.852	11.852	0.000	99	156891	50.0	42.4	
104 2-Chlorotoluene	126	11.943	11.943	0.000	97	133346	50.0	41.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	12.004	12.004	0.000	97	170097	50.0	48.8	
106 1,3,5-Trimethylbenzene	105	12.035	12.035	0.000	94	477187	50.0	45.0	
107 4-Chlorotoluene	126	12.065	12.065	0.000	96	151863	50.0	43.9	
108 tert-Butylbenzene	119	12.351	12.351	0.000	94	356298	50.0	40.2	
110 1,2,4-Trimethylbenzene	105	12.412	12.412	0.000	97	468755	50.0	43.5	
111 1,2-dichloro-4-(trifluorom	214	12.454	12.454	0.000	95	121191	50.0	44.9	
112 sec-Butylbenzene	105	12.576	12.576	0.000	94	521990	50.0	42.2	
113 1,3-Dichlorobenzene	146	12.691	12.691	0.000	98	258540	50.0	44.6	
114 4-Isopropyltoluene	119	12.728	12.728	0.000	97	455492	50.0	44.2	
115 1,4-Dichlorobenzene	146	12.795	12.795	0.000	96	271881	50.0	45.7	
116 2,4-Dichloro-1-(trifluorom	214	12.819	12.819	0.000	94	116018	50.0	46.2	
118 2,5-Dichlorobenzotrifluori	214	12.862	12.862	0.000	0	124999	50.0	46.1	
120 n-Butylbenzene	91	13.141	13.141	0.000	98	353806	50.0	42.1	
121 1,2-Dichlorobenzene	146	13.147	13.147	0.000	97	255933	50.0	46.4	
122 1,2-Dibromo-3-Chloropropan	75	13.938	13.938	0.000	77	23395	50.0	38.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.084	14.084	0.000	0	557793	150.0	159.3	
125 2,3- & 3,4- Dichlorotoluen	125	14.504	14.504	0.000	0	375386	100.0	103.7	
126 1,2,4-Trichlorobenzene	180	14.765	14.765	0.000	94	111696	50.0	44.2	
127 Hexachlorobutadiene	225	14.911	14.911	0.000	94	42422	50.0	45.9	
128 Naphthalene	128	15.033	15.033	0.000	97	363200	50.0	42.2	
129 1,2,3-Trichlorobenzene	180	15.258	15.258	0.000	96	99176	50.0	43.0	
131 2,4,5-Trichlorotoluene	159	16.024	16.024	0.000	0	49132	50.0	44.8	
130 2,3,6-Trichlorotoluene	159	16.121	16.121	0.000	97	49838	50.0	48.8	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	88.1	
S 133 Xylenes, Total	106				0		100.0	94.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	87.7	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

voaWEEmix1stR_00014	Amount Added: 2.00	Units: uL	
voaWKetmix1st_00006	Amount Added: 2.00	Units: uL	
voaWVA1stRest_00021	Amount Added: 2.00	Units: uL	
voaWAcro1stRe_00021	Amount Added: 6.00	Units: uL	
VOA8260VOAPRI_00268	Amount Added: 2.00	Units: uL	
voaW2clev1stR_00023	Amount Added: 2.00	Units: uL	
VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D02.D

Injection Date: 25-Oct-2017 22:12:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

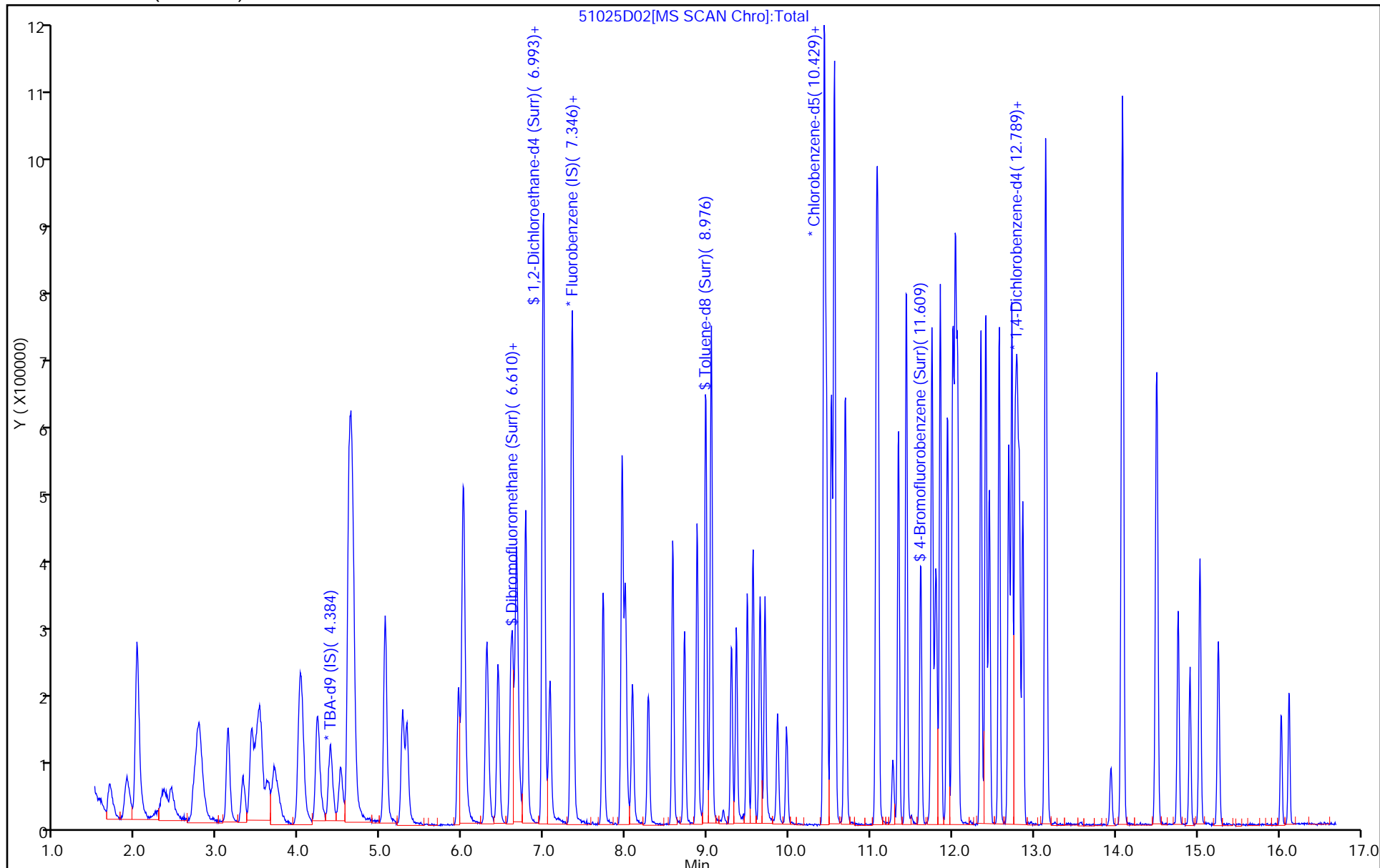
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

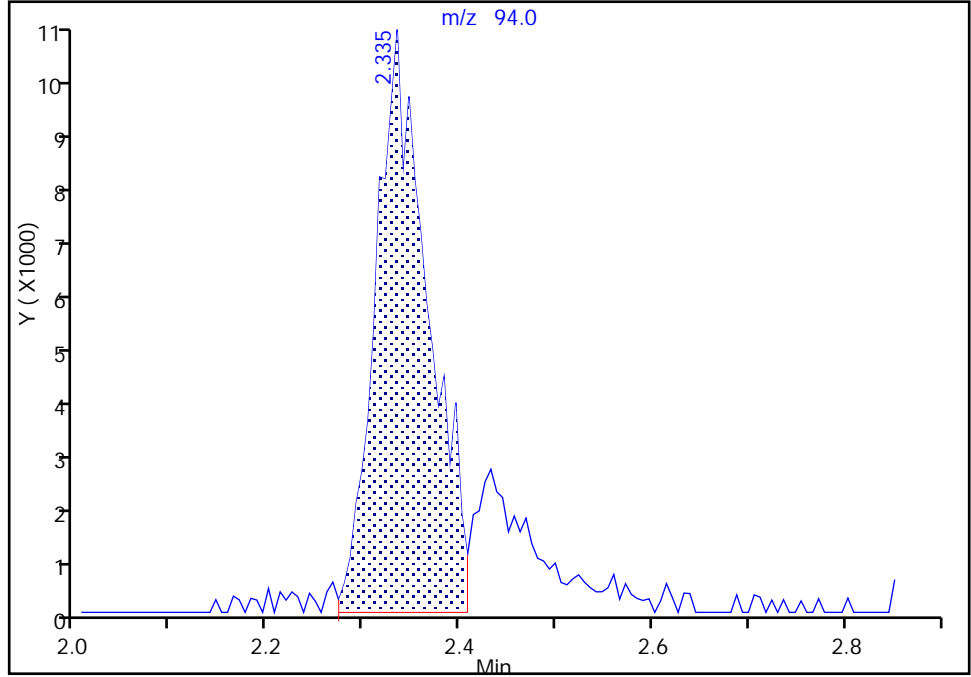
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D02.D  
Injection Date: 25-Oct-2017 22:12:30 Instrument ID: CHHP5  
Lims ID: CCVIS  
Client ID:  
Operator ID: 034635 ALS Bottle#: 2 Worklist Smp#: 2  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Signal: 1

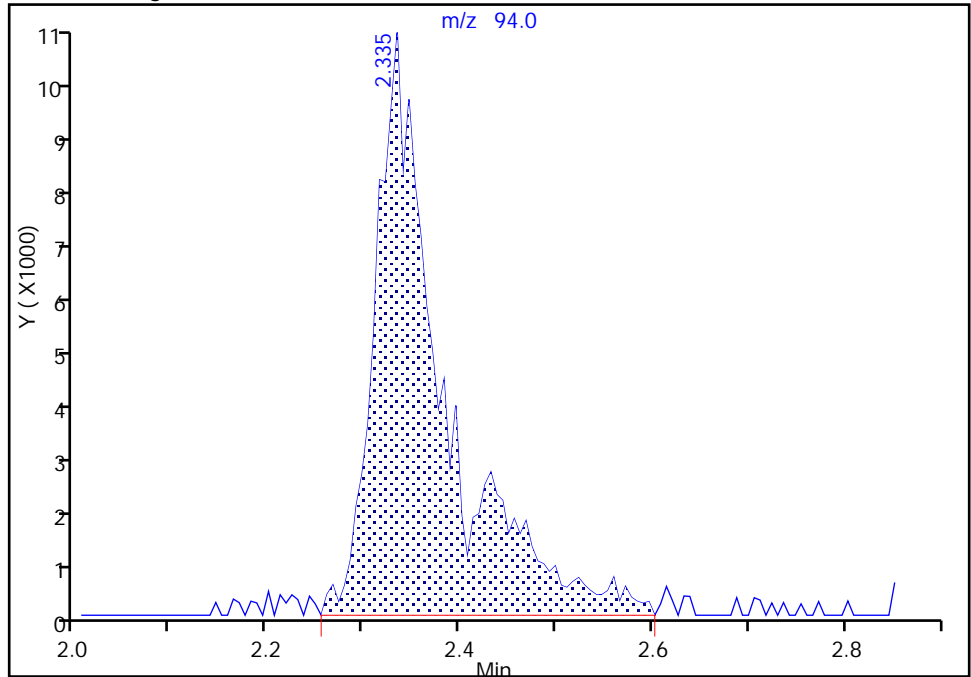
RT: 2.33  
Area: 41318  
Amount: 27.969422  
Amount Units: ng

Processing Integration Results



RT: 2.33  
Area: 53328  
Amount: 36.099359  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 25-Oct-2017 22:47:06  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography

TestAmerica Pittsburgh

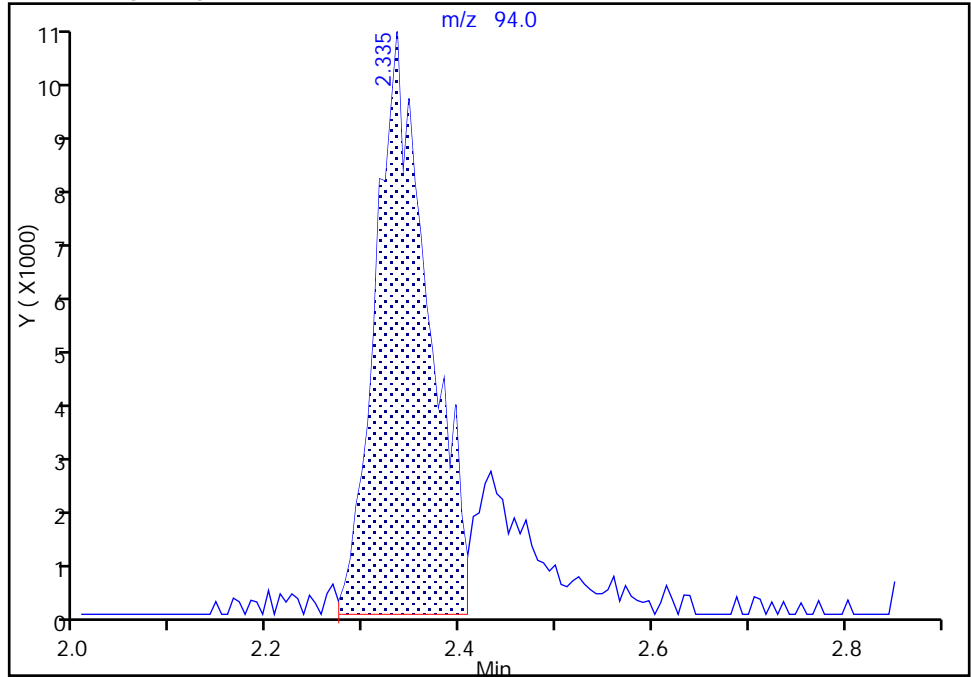
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D02.D  
Injection Date: 25-Oct-2017 22:12:30 Instrument ID: CHHP5  
Lims ID: CCVIS  
Client ID:  
Operator ID: 034635 ALS Bottle#: 2 Worklist Smp#: 2  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector MS SCAN

15 Bromomethane, CAS: 74-83-9

Signal: 1

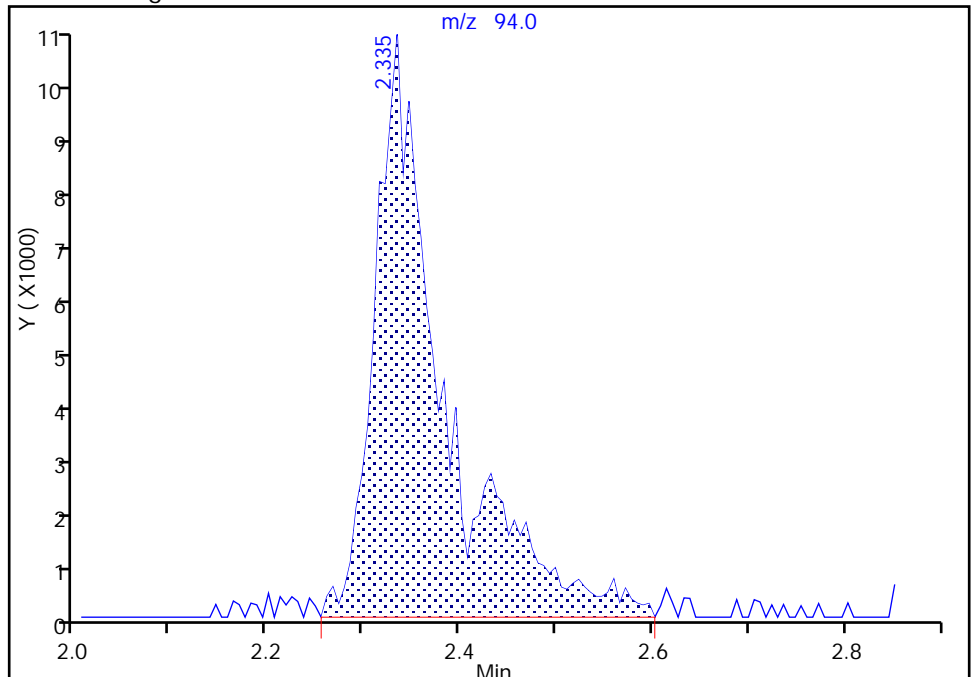
RT: 2.33  
Area: 41318  
Amount: 27.969422  
Amount Units: ng

Processing Integration Results



RT: 2.33  
Area: 53328  
Amount: 36.099359  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 25-Oct-2017 22:47:13

Audit Action: Assigned Compound ID

Audit Reason: Poor chromatography

TestAmerica Pittsburgh

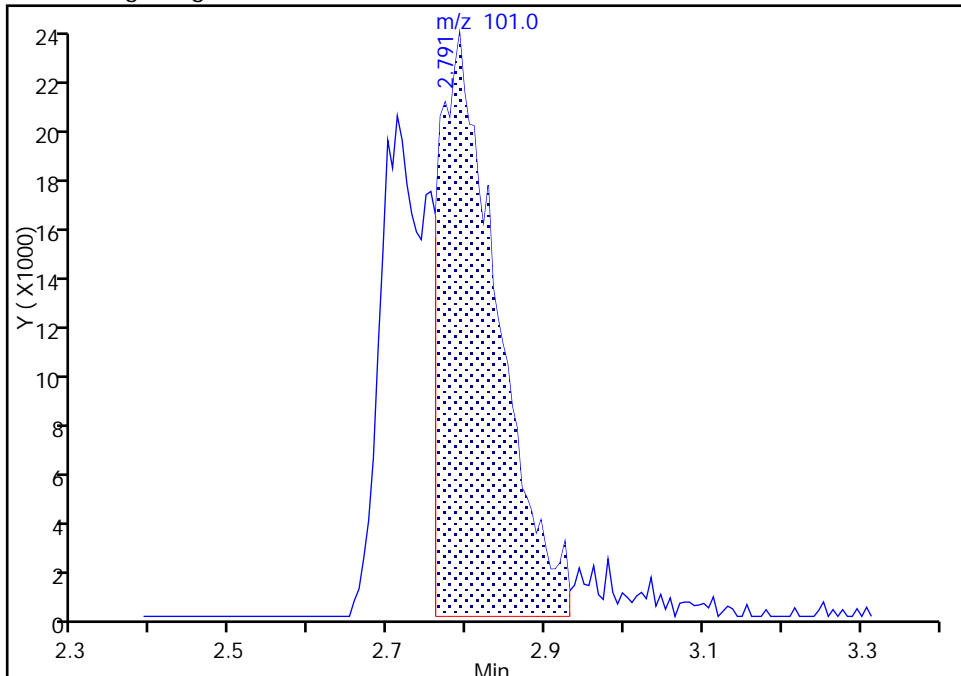
Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D02.D  
Injection Date: 25-Oct-2017 22:12:30 Instrument ID: CHHP5  
Lims ID: CCVIS  
Client ID:  
Operator ID: 034635 ALS Bottle#: 2 Worklist Smp#: 2  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

18 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

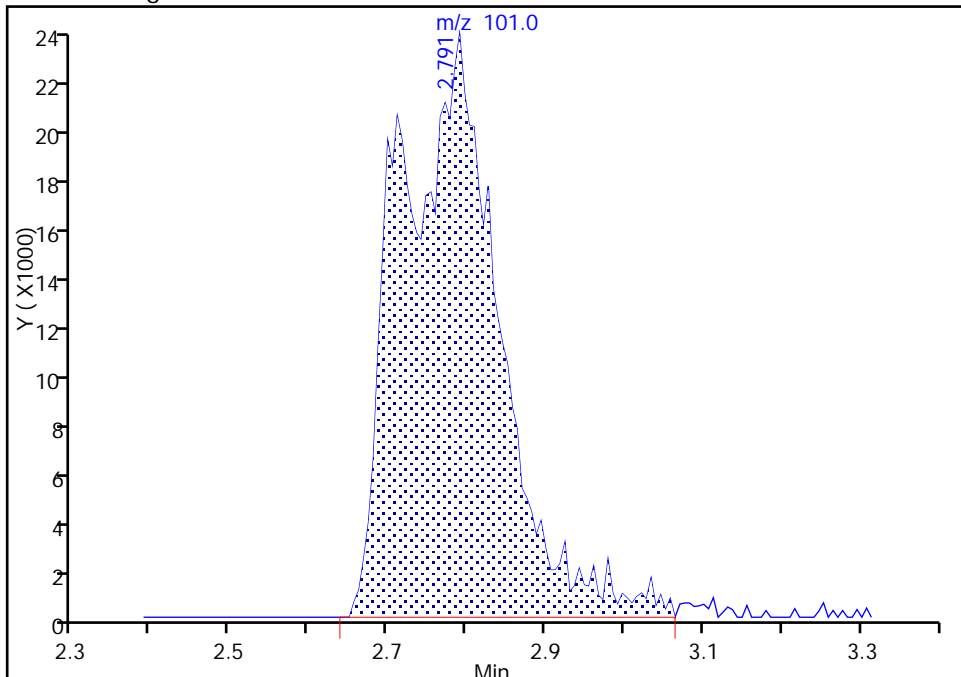
RT: 2.79  
Area: 118708  
Amount: 30.921621  
Amount Units: ng

Processing Integration Results



RT: 2.79  
Area: 203767  
Amount: 53.078192  
Amount Units: ng

Manual Integration Results



Reviewer: bungardf, 25-Oct-2017 22:46:34  
Audit Action: Manually Integrated

Audit Reason: Poor chromatography



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D01.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 27-Jul-2017 00:22:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: 180-0017756-001  
 Misc. Info.: BFB  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jul-2017 01:04:43 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: bungardf Date: 27-Jul-2017 05:09:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
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\$ 10 BFB	95	8.334	8.334	0.000	0	79656	NR	NR	
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**QC Flag Legend**

Processing Flags

NR - Missing Quant Standard

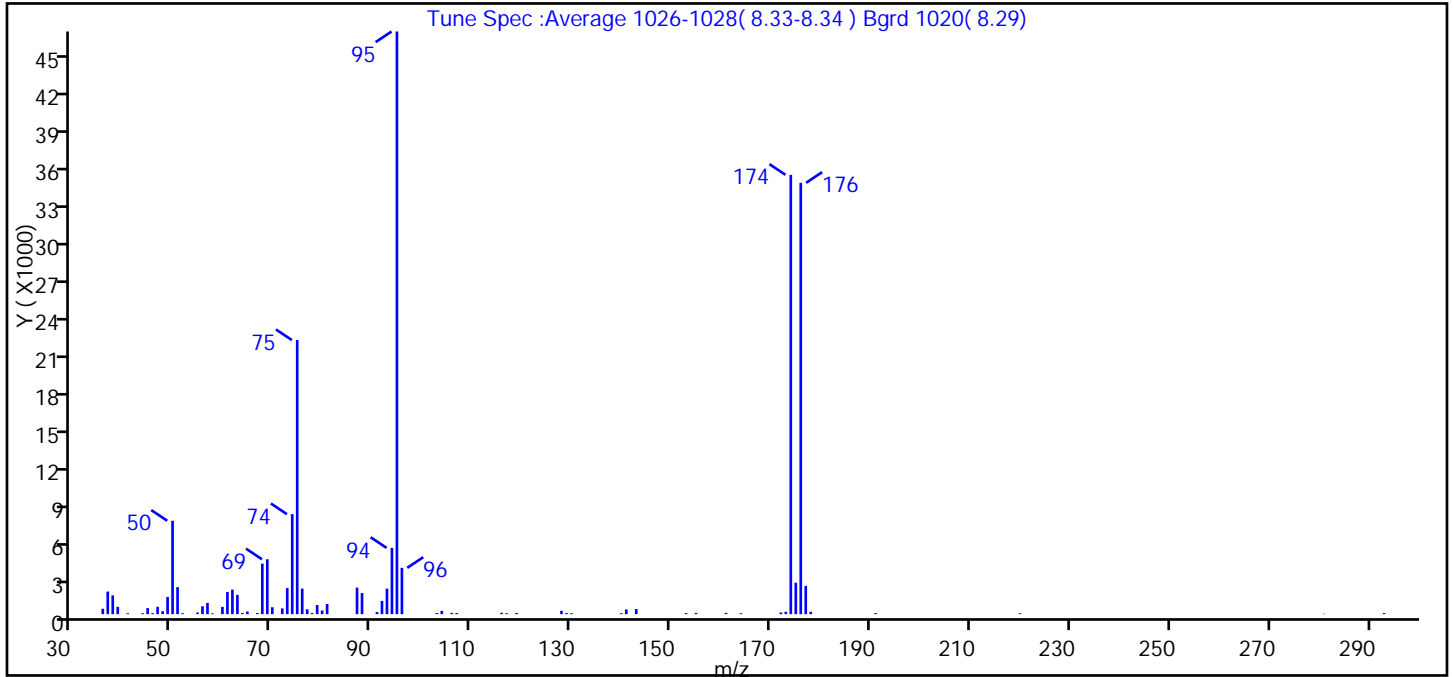
**Reagents:**

VOABFB25\_00090 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D01.D  
 Injection Date: 27-Jul-2017 00:22:30 Instrument ID: CHHP5  
 Lims ID: BFB  
 Client ID:  
 Operator ID: 034635 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
 Tune Method: BFB Method 8260

\$ 10 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	47.0
96	5 to 9% of m/z 95	7.9
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	75.4
175	5 to 9% of m/z 174	5.4 (7.2)
176	Greater than 95% but less than 101% of m/z 174	74.0 (98.2)
177	5 to 9% of m/z 176	4.8 (6.5)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D01.D\MSVOA\_LL\_CHHP5.rsl\spec  
 Injection Date: 27-Jul-2017 00:22:30  
 Spectrum: Tune Spec :Average 1026-1028( 8.33-8.34 ) Bgrd 1020( 8.29)  
 Base Peak: 95.00  
 Minimum % Base Peak: 0  
 Number of Points: 74

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	433	61.00	1769	87.00	2123	141.00	374
37.00	1806	62.00	1963	88.00	1682	143.00	408
38.00	1500	63.00	1542	91.00	169	153.00	84
39.00	582	64.00	92	92.00	1061	155.00	97
41.00	70	65.00	209	93.00	2045	161.00	102
44.00	76	67.00	88	94.00	5297	164.00	73
45.00	487	68.00	4038	95.00	46600	172.00	132
46.00	79	69.00	4388	96.00	3703	173.00	191
47.00	590	70.00	551	103.00	90	174.00	35136
48.00	235	72.00	459	104.00	258	175.00	2515
49.00	1375	73.00	2085	106.00	102	176.00	34496
50.00	7469	74.00	7996	107.00	90	177.00	2259
51.00	2160	75.00	21920	116.00	116	178.00	192
52.00	70	76.00	2042	117.00	73	191.00	80
55.00	130	77.00	386	119.00	97	220.00	71
56.00	624	78.00	89	128.00	269	281.00	30
57.00	904	79.00	726	129.00	86	293.00	87
58.00	67	80.00	290	130.00	72		
60.00	579	81.00	809	140.00	72		

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D01.D

Injection Date: 27-Jul-2017 00:22:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

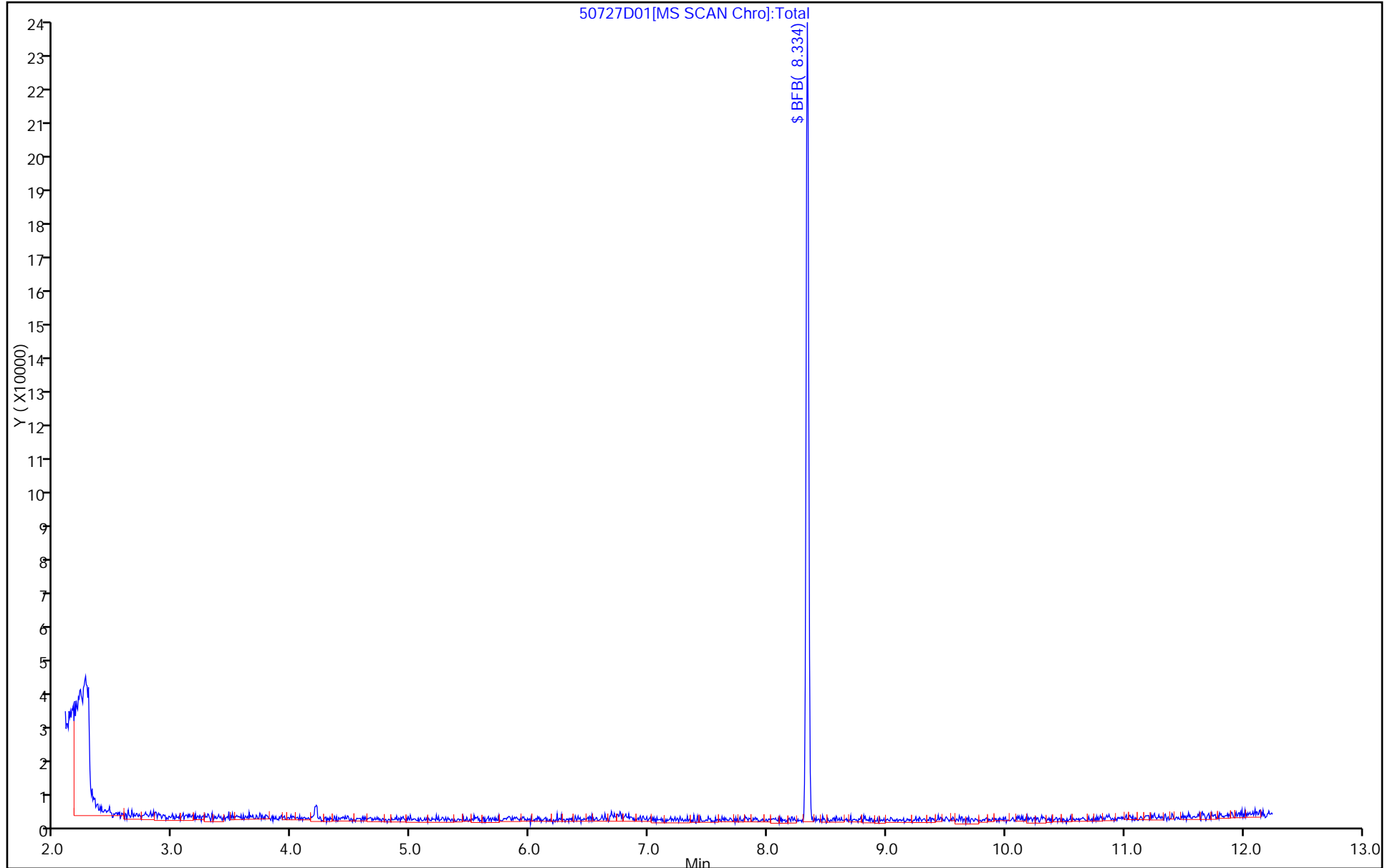
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D01.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 24-Oct-2017 22:50:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-001  
 Misc. Info.: BFB  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 21:04:20 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
\$ 10 BFB	95	8.333	8.333	0.000	0	94118	NR	NR	

**QC Flag Legend**

Processing Flags  
 NR - Missing Quant Standard

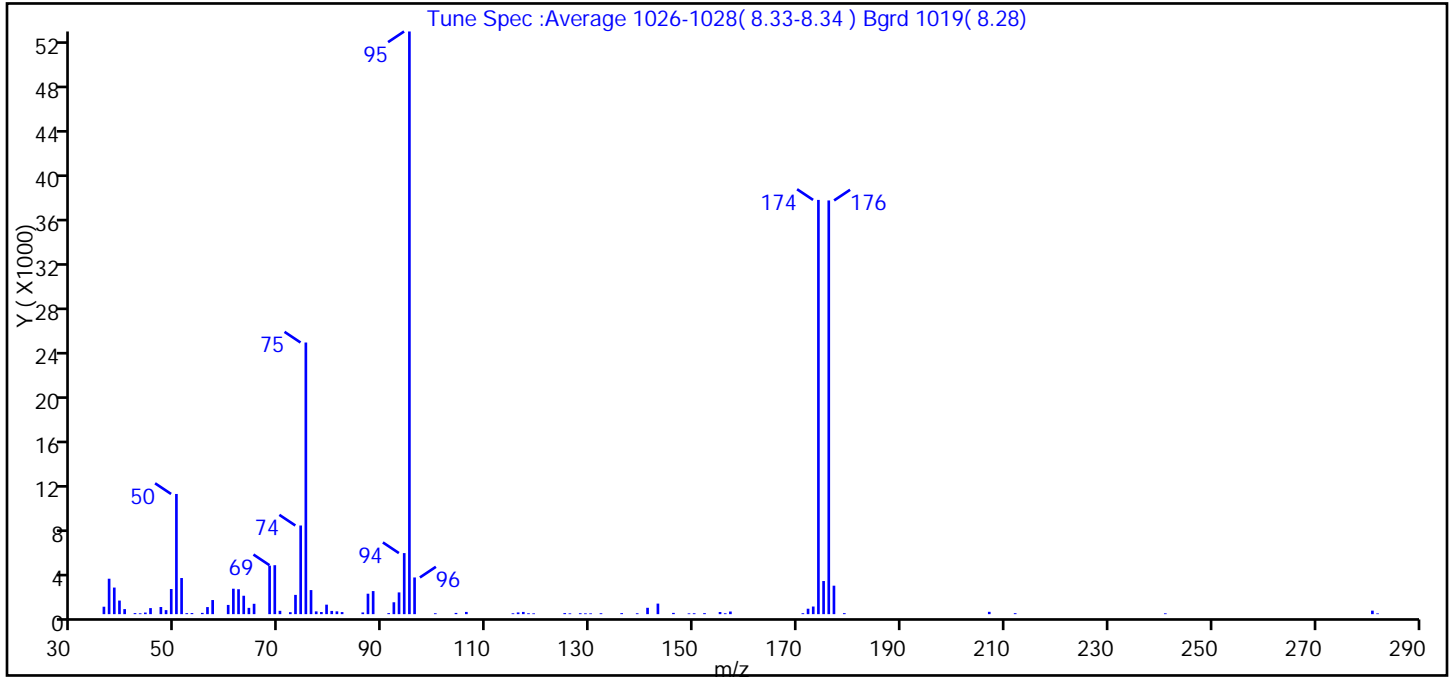
**Reagents:**

VOABFB25\_00094 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D01.D  
 Injection Date: 24-Oct-2017 22:50:30 Instrument ID: CHHP5  
 Lims ID: BFB  
 Client ID:  
 Operator ID: 034635 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
 Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.6
75	30 to 60% of m/z 95	46.6
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	1.3 (1.8)
174	50 to 120% of m/z 95	71.1
175	5 to 9% of m/z 174	5.7 (8.0)
176	Greater than 95% but less than 101% of m/z 174	71.0 (99.9)
177	5 to 9% of m/z 176	4.9 (6.9)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D01.D\MSVOA\_LL\_CHHP5.rsl\spec  
 Injection Date: 24-Oct-2017 22:50:30  
 Spectrum: Tune Spec :Average 1026-1028( 8.33-8.34 ) Bgrd 1019( 8.28)  
 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	665	63.00	1647	93.00	1946	146.00	113
37.00	3172	64.00	562	94.00	5466	149.00	70
38.00	2380	65.00	927	95.00	52168	150.00	80
39.00	1216	68.00	4343	96.00	3284	152.00	90
40.00	451	69.00	4382	100.00	79	155.00	192
42.00	93	70.00	298	104.00	110	156.00	80
43.00	75	72.00	175	106.00	199	157.00	235
44.00	142	73.00	1724	115.00	77	171.00	83
45.00	541	74.00	7936	116.00	153	172.00	486
47.00	639	75.00	24320	117.00	199	173.00	682
48.00	360	76.00	2155	118.00	78	174.00	37088
49.00	2250	77.00	247	119.00	71	175.00	2965
50.00	10760	78.00	191	125.00	95	176.00	37040
51.00	3234	79.00	849	126.00	70	177.00	2548
52.00	88	80.00	288	128.00	83	179.00	89
53.00	98	81.00	251	129.00	72	207.00	208
55.00	113	82.00	185	130.00	71	212.00	86
56.00	633	86.00	151	132.00	81	241.00	73
57.00	1262	87.00	1830	136.00	91	281.00	314
60.00	825	88.00	2065	139.00	79	282.00	68
61.00	2277	91.00	92	141.00	568		
62.00	2230	92.00	1063	143.00	944		

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D01.D

Injection Date: 24-Oct-2017 22:50:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

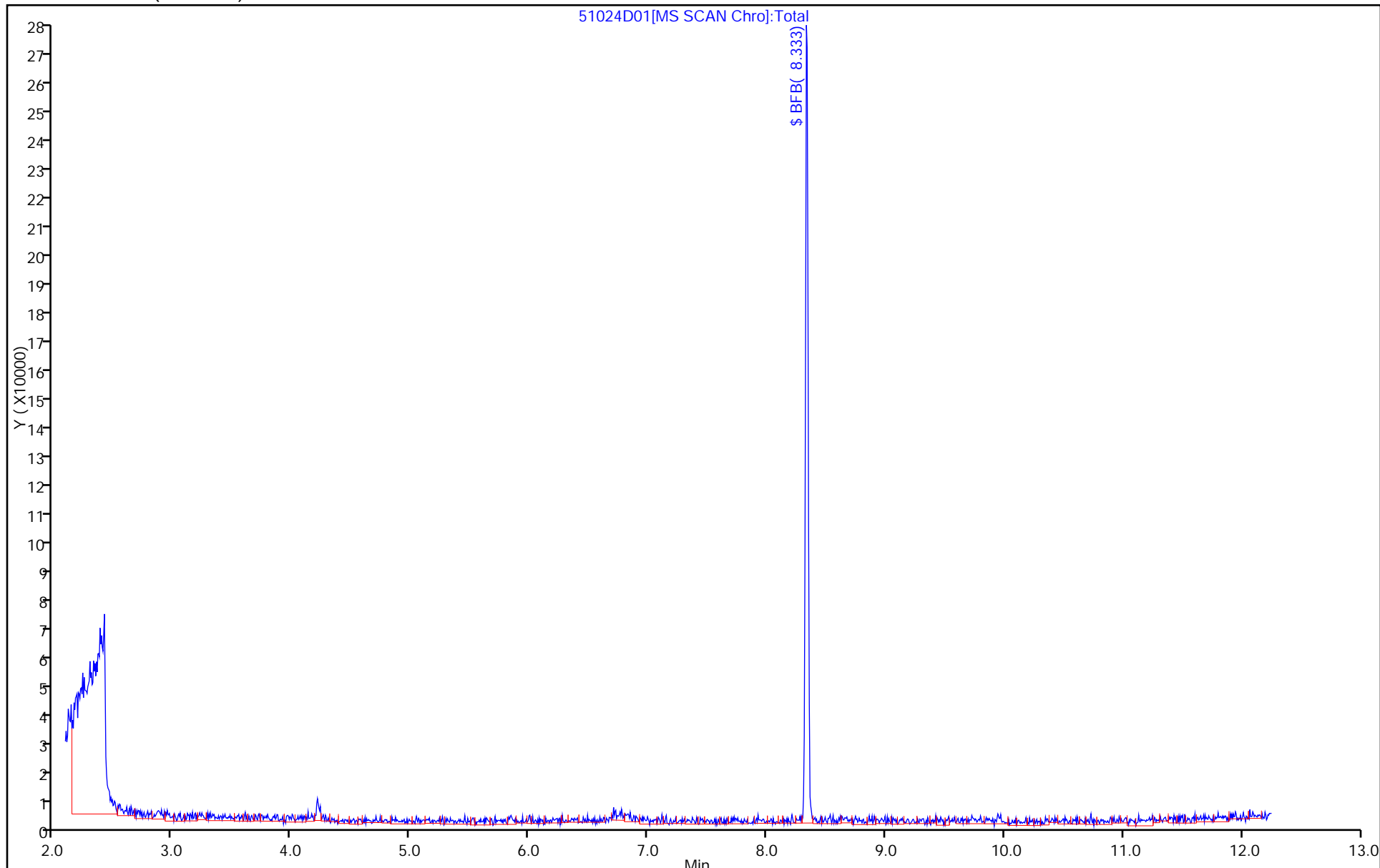
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





TestAmerica Pittsburgh  
 Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D01.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 25-Oct-2017 21:39:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-001  
 Misc. Info.: BFB  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:10 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
\$ 10 BFB	95	8.342	8.342	0.000	0	60032	NR	NR	

**QC Flag Legend**

Processing Flags  
 NR - Missing Quant Standard

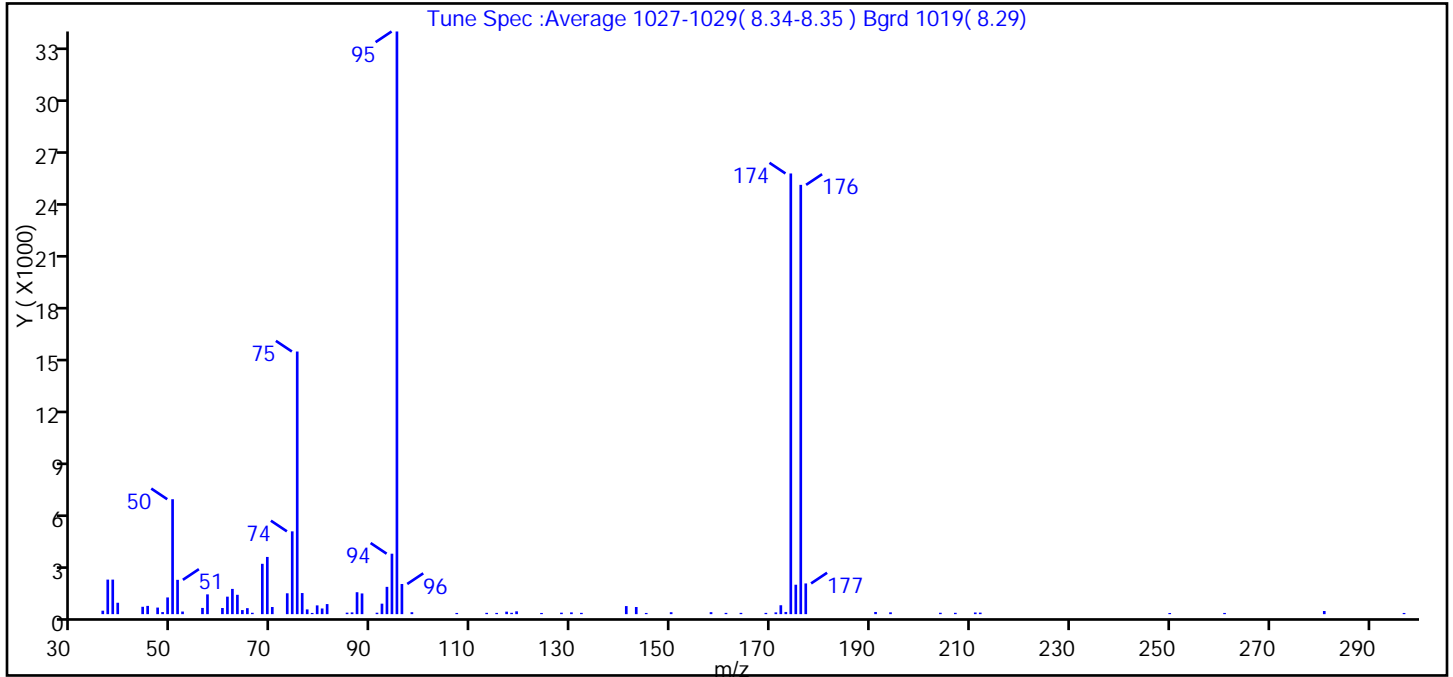
**Reagents:**

VOABFB25\_00094 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D01.D  
 Injection Date: 25-Oct-2017 21:39:30 Instrument ID: CHHP5  
 Lims ID: BFB  
 Client ID:  
 Operator ID: 034635 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
 Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.7
75	30 to 60% of m/z 95	45.1
96	5 to 9% of m/z 95	5.2
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	75.6
175	5 to 9% of m/z 174	5.1 (6.7)
176	Greater than 95% but less than 101% of m/z 174	73.7 (97.4)
177	5 to 9% of m/z 176	5.3 (7.2)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D01.D\MSVOA\_LL\_CHHP5.rsl\spec  
 Injection Date: 25-Oct-2017 21:39:30  
 Spectrum: Tune Spec :Average 1027-1029( 8.34-8.35 ) Bgrd 1019( 8.29)  
 Base Peak: 95.00  
 Minimum % Base Peak: 0  
 Number of Points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	199	66.00	79	94.00	3484	164.00	74
37.00	1991	68.00	2902	95.00	33584	169.00	73
38.00	1991	69.00	3297	96.00	1738	171.00	102
39.00	657	70.00	411	98.00	111	172.00	513
44.00	424	73.00	1202	107.00	69	173.00	127
45.00	476	74.00	4772	113.00	75	174.00	25400
47.00	379	75.00	15137	115.00	71	175.00	1696
48.00	119	76.00	1216	117.00	144	176.00	24744
49.00	963	77.00	274	118.00	77	177.00	1770
50.00	6624	78.00	70	119.00	162	191.00	125
51.00	1978	79.00	505	124.00	69	194.00	105
52.00	150	80.00	326	128.00	85	204.00	80
56.00	358	81.00	580	130.00	102	207.00	77
57.00	1140	85.00	86	132.00	75	211.00	95
60.00	353	86.00	101	141.00	465	212.00	88
61.00	1008	87.00	1264	143.00	412	250.00	66
62.00	1454	88.00	1193	145.00	69	261.00	69
63.00	1115	91.00	83	150.00	111	281.00	181
64.00	235	92.00	604	158.00	114	297.00	68
65.00	345	93.00	1573	161.00	73		

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D01.D

Injection Date: 25-Oct-2017 21:39:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

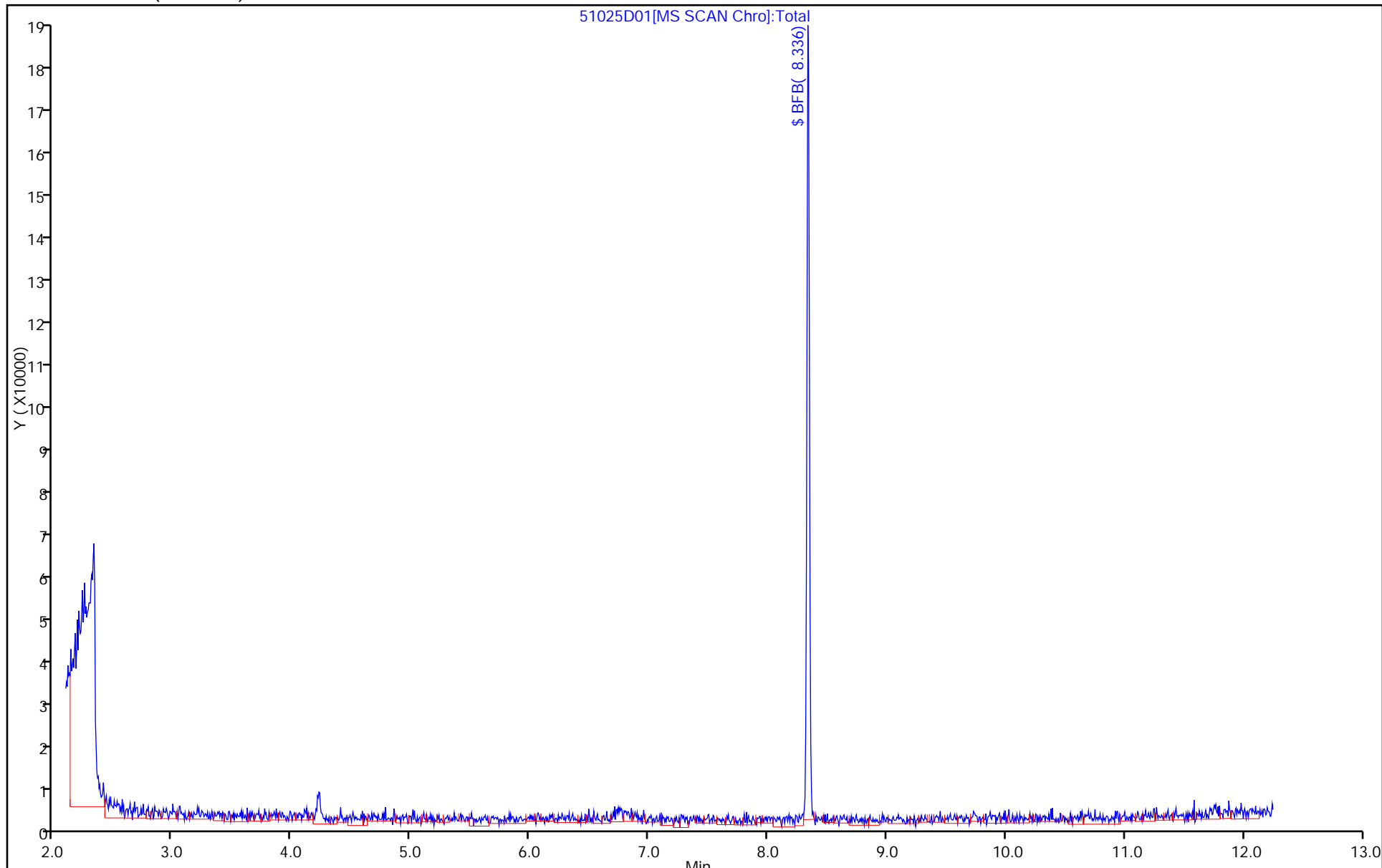
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-226849/5  
 Matrix: Water Lab File ID: 51024D05.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 01:02  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	1.0	U	1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-226849/5  
 Matrix: Water Lab File ID: 51024D05.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 01:02  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		65-121
2037-26-5	Toluene-d8 (Surr)	92		73-120
460-00-4	4-Bromofluorobenzene (Surr)	92		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D05.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 25-Oct-2017 01:02:30 ALS Bottle#: 5 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-005  
 Misc. Info.: MB  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 01:22:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.364	4.376	-0.012	0	198793	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.344	7.331	0.013	99	506554	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.433	10.427	0.006	86	126455	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.768	12.768	0.000	96	190824	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.626	6.614	0.012	93	124848	50.0	51.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.991	6.985	0.006	0	163090	50.0	54.9	
\$ 7 Toluene-d8 (Surr)	98	8.979	8.979	0.000	94	464880	50.0	46.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.607	11.613	-0.006	86	167808	50.0	46.2	
11 Dichlorodifluoromethane	85		1.670					ND	
12 Chloromethane	50		1.895					ND	
14 Butadiene	39		2.010					ND	
13 Vinyl chloride	62		2.010					ND	
15 Bromomethane	94		2.332					ND	
16 Chloroethane	64		2.436					ND	
17 Dichlorofluoromethane	67		2.752					ND	
18 Trichlorofluoromethane	101		2.795					ND	
19 Ethanol	45		2.821					ND	
20 Ethyl ether	59		3.123					ND	
21 Acrolein	56		3.312					ND	
22 1,1-Dichloroethene	96		3.409					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.494					ND	
24 Acetone	43		3.530					ND	
25 Iodomethane	142		3.610					ND	
26 Carbon disulfide	76		3.701					ND	
27 Isopropyl alcohol	45		3.816					ND	
29 Acetonitrile	41		3.981					ND	
28 3-Chloro-1-propene	76		3.999					ND	
30 Methyl acetate	43		4.029					ND	
31 Methylene Chloride	84		4.230					ND	
32 2-Methyl-2-propanol	59		4.510					ND	
33 Acrylonitrile	53		4.607					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.631					ND	
35 Methyl tert-butyl ether	73		4.656					ND	
36 Hexane	57		5.057					ND	
37 1,1-Dichloroethane	63		5.264					ND	
38 Vinyl acetate	43		5.318					ND	
41 Isopropyl ether	45		5.367					ND	
39 2-Chloro-1,3-butadiene	53		5.367					ND	
40 Isopropyl ether TIC	45		5.410					ND	
42 Tert-butyl ethyl ether	59		5.835					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
44 2,2-Dichloropropane	97		6.000					ND	
45 cis-1,2-Dichloroethene	96		6.006					ND	
46 2-Butanone (MEK)	43		6.024					ND	
48 Ethyl acetate	43		6.097					ND	
47 Propionitrile	54		6.103					ND	
50 Methacrylonitrile	41		6.273					ND	
49 Chlorobromomethane	128		6.291					ND	
51 Tetrahydrofuran	42		6.310					ND	
52 Chloroform	83	6.450	6.437	0.013	3	2261		0.4608	
53 1,1,1-Trichloroethane	97		6.589					ND	
54 Cyclohexane	56		6.662					ND	
56 Carbon tetrachloride	117		6.766					ND	
55 1,1-Dichloropropene	75		6.778					ND	
57 Isobutyl alcohol	41		6.985					ND	
58 Benzene	78		6.997					ND	
59 1,2-Dichloroethane	62		7.070					ND	
151 Isooctane	57		7.149					ND	
61 Tert-amyl methyl ether	73		7.173					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.350					ND	
63 n-Butanol	56		7.684					ND	
64 Trichloroethene	130		7.721					ND	
65 Ethyl acrylate	55		7.848					ND	
66 Methylcyclohexane	83		7.958					ND	
67 1,2-Dichloropropane	63		7.994					ND	
68 Dibromomethane	93		8.079					ND	
70 1,4-Dioxane	88		8.079					ND	
69 Methyl methacrylate	69		8.086					ND	
71 Dichlorobromomethane	83		8.274					ND	
73 2-Chloroethyl vinyl ether	63		8.578					ND	
74 cis-1,3-Dichloropropene	75		8.718					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.870					ND	
76 Toluene	91		9.046					ND	
77 trans-1,3-Dichloropropene	75		9.290					ND	
78 Ethyl methacrylate	69		9.356					ND	
79 1,1,2-Trichloroethane	97		9.490					ND	
80 Tetrachloroethene	164		9.557					ND	
81 1,3-Dichloropropane	76		9.642					ND	
82 2-Hexanone	43		9.703					ND	
83 n-Butyl acetate	43		9.825					ND	
84 Chlorodibromomethane	129		9.855					ND	
85 Ethylene Dibromide	107		9.971					ND	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.433					ND	
87 Chlorobenzene	112		10.457					ND	
88 4-Chlorobenzotrifluoride	180		10.518					ND	
89 1,1,1,2-Tetrachloroethane	131		10.548					ND	
90 Ethylbenzene	106		10.561					ND	
91 m-Xylene & p-Xylene	106		10.688					ND	
92 o-Xylene	106		11.071					ND	
93 Styrene	104		11.090					ND	
94 Bromoform	173		11.272					ND	
95 Cyclohexanol	57		11.288					ND	
96 2-Chlorobenzotrifluoride	180		11.339					ND	
97 Isopropylbenzene	105		11.436					ND	
98 Cyclohexanone	55		11.528					ND	
100 Bromobenzene	156		11.746					ND	
99 1,1,2,2-Tetrachloroethane	83		11.752					ND	
102 trans-1,4-Dichloro-2-buten	53		11.789					ND	
101 1,2,3-Trichloropropane	110		11.807					ND	
103 N-Propylbenzene	120		11.850					ND	
104 2-Chlorotoluene	126		11.935					ND	
105 3-Chlorotoluene	126		12.002					ND	
106 1,3,5-Trimethylbenzene	105		12.038					ND	
107 4-Chlorotoluene	126		12.063					ND	
108 tert-Butylbenzene	119		12.348					ND	
110 1,2,4-Trimethylbenzene	105		12.409					ND	
111 1,2-dichloro-4-(trifluorom	214		12.452					ND	
112 sec-Butylbenzene	105		12.573					ND	
113 1,3-Dichlorobenzene	146		12.689					ND	
114 4-Isopropyltoluene	119		12.732					ND	
115 1,4-Dichlorobenzene	146		12.798					ND	
116 2,4-Dichloro-1-(triflourom	214		12.823					ND	
117 1,2,3-Trimethylbenzene	105		12.823					ND	
118 2,5-Dichlorobenzotrifluori	214		12.865					ND	
119 Benzyl chloride	91		12.908					ND	
120 n-Butylbenzene	91		13.139					ND	
121 1,2-Dichlorobenzene	146		13.151					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.936					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.088					ND	
124 1,3,5-Trichlorobenzene	180		14.130					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.501					ND	
126 1,2,4-Trichlorobenzene	180		14.763					ND	
127 Hexachlorobutadiene	225		14.909					ND	
128 Naphthalene	128	15.030	15.030	0.000	94	7974		0.8111	
129 1,2,3-Trichlorobenzene	180		15.255					ND	
131 2,4,5-Trichlorotoluene	159		16.028					ND	
130 2,3,6-Trichlorotoluene	159		16.119					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	
S 154 Total BTEX	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
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T 136 Mesityl oxide TIC	83		0.000						ND
T 153 1,2 Epoxybutane TIC	42		6.253						ND
T 137 Tetrahydrofuran TIC	42		6.253						ND

**Reagents:**

VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D05.D

Injection Date: 25-Oct-2017 01:02:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: MB

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

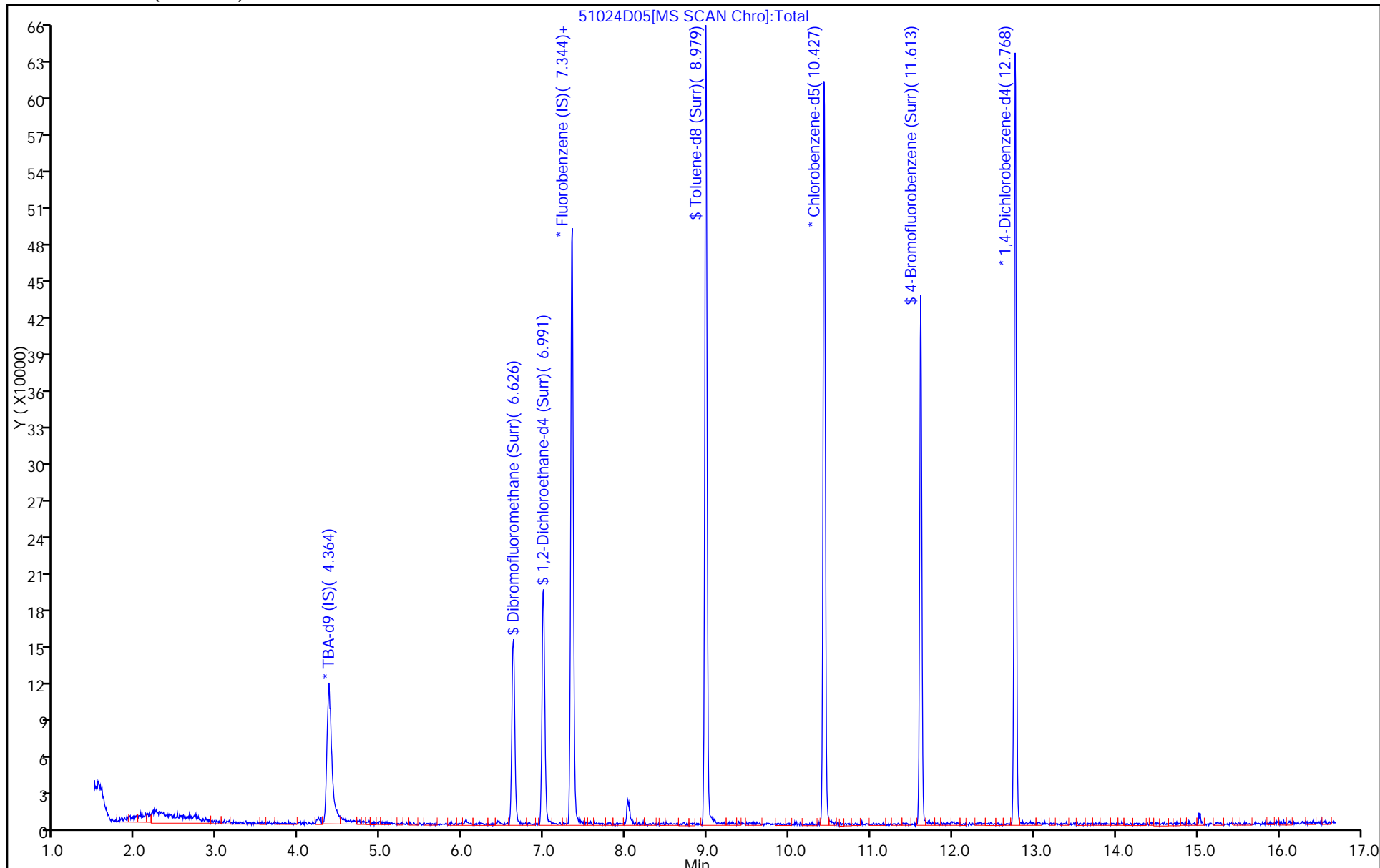
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D05.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 25-Oct-2017 01:02:30 ALS Bottle#: 5 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-005  
 Misc. Info.: MB  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 20:50:18 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 01:22:51

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	51.2	102.45
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	54.9	109.73
\$ 7 Toluene-d8 (Surr)	50.0	46.2	92.38
\$ 8 4-Bromofluorobenzene (Surr)	50.0	46.2	92.33

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-227010/5  
 Matrix: Water Lab File ID: 51025D05.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 23:51  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.90
75-01-4	Vinyl chloride	1.0	U	1.0	0.88
74-83-9	Bromomethane	1.0	U	1.0	0.89
75-00-3	Chloroethane	1.0	U	1.0	0.90
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.55
67-64-1	Acetone	5.0	U	5.0	3.4
75-15-0	Carbon disulfide	1.0	U	1.0	0.88
75-09-2	Methylene Chloride	1.0	U	1.0	0.36
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.67
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.59
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.63
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.71
74-97-5	Bromochloromethane	1.0	U	1.0	0.63
78-93-3	2-Butanone (MEK)	5.0	U	5.0	2.6
67-66-3	Chloroform	1.0	U	1.0	0.60
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.60
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.88
71-43-2	Benzene	1.0	U	1.0	0.60
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.57
79-01-6	Trichloroethene	1.0	U	1.0	0.69
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.66
75-27-4	Bromodichloromethane	1.0	U	1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	3.1
108-88-3	Toluene	1.0	U	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.58
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.45
127-18-4	Tetrachloroethene	1.0	U	1.0	0.47
591-78-6	2-Hexanone	5.0	U	5.0	3.3
124-48-1	Dibromochloromethane	1.0	U	1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.50
108-90-7	Chlorobenzene	1.0	U	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.57
100-41-4	Ethylbenzene	1.0	U	1.0	0.51
1330-20-7	Xylenes, Total	2.0	U	2.0	0.89
100-42-5	Styrene	1.0	U	1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-227010/5  
 Matrix: Water Lab File ID: 51025D05.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 23:51  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60
107-13-1	Acrylonitrile	20	U	20	7.8
123-91-1	1,4-Dioxane	200	U	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		65-121
2037-26-5	Toluene-d8 (Surr)	94		73-120
460-00-4	4-Bromofluorobenzene (Surr)	92		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D05.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 25-Oct-2017 23:51:30 ALS Bottle#: 5 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-005  
 Misc. Info.: MB  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 00:14:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.367	4.384	-0.018	0	204506	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.340	7.340	0.000	98	490132	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.430	10.429	0.001	86	118973	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.771	12.770	0.001	97	173707	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.617	6.610	0.007	93	123783	50.0	52.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.988	6.987	0.001	0	157312	50.0	54.7	
\$ 7 Toluene-d8 (Surr)	98	8.982	8.982	0.000	94	445099	50.0	47.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.609	11.609	0.000	86	157345	50.0	46.0	
11 Dichlorodifluoromethane	85		1.684					ND	
12 Chloromethane	50		1.891					ND	
14 Butadiene	39		2.012					ND	
13 Vinyl chloride	62		2.012					ND	
15 Bromomethane	94		2.335					ND	
16 Chloroethane	64		2.426					ND	
17 Dichlorofluoromethane	67		2.760					ND	
18 Trichlorofluoromethane	101		2.791					ND	
19 Ethanol	45		2.821					ND	
20 Ethyl ether	59		3.131					ND	
21 Acrolein	56		3.314					ND	
22 1,1-Dichloroethene	96		3.411					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.496					ND	
24 Acetone	43		3.539					ND	
25 Iodomethane	142		3.612					ND	
26 Carbon disulfide	76		3.703					ND	
27 Isopropyl alcohol	45		3.816					ND	
29 Acetonitrile	41		3.981					ND	
28 3-Chloro-1-propene	76		4.001					ND	
30 Methyl acetate	43		4.038					ND	
31 Methylene Chloride	84		4.226					ND	
32 2-Methyl-2-propanol	59		4.506					ND	
33 Acrylonitrile	53		4.609					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.640					ND	
35 Methyl tert-butyl ether	73		4.664					ND	
36 Hexane	57		5.053					ND	
37 1,1-Dichloroethane	63		5.266					ND	
38 Vinyl acetate	43		5.321					ND	
41 Isopropyl ether	45		5.367					ND	
39 2-Chloro-1,3-butadiene	53		5.367					ND	
40 Isopropyl ether TIC	45		5.410					ND	
42 Tert-butyl ethyl ether	59		5.835					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
44 2,2-Dichloropropane	97		6.008					ND	
45 cis-1,2-Dichloroethene	96		6.008					ND	
46 2-Butanone (MEK)	43		6.026					ND	
48 Ethyl acetate	43		6.097					ND	
47 Propionitrile	54		6.103					ND	
50 Methacrylonitrile	41		6.273					ND	
49 Chlorobromomethane	128		6.288					ND	
51 Tetrahydrofuran	42		6.306					ND	
52 Chloroform	83		6.434					ND	
53 1,1,1-Trichloroethane	97		6.592					ND	
54 Cyclohexane	56		6.659					ND	
56 Carbon tetrachloride	117		6.762					ND	
55 1,1-Dichloropropene	75		6.780					ND	
57 Isobutyl alcohol	41		6.987					ND	
58 Benzene	78		6.993					ND	
59 1,2-Dichloroethane	62		7.072					ND	
151 Isooctane	57		7.149					ND	
61 Tert-amyl methyl ether	73		7.173					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.352					ND	
63 n-Butanol	56		7.684					ND	
64 Trichloroethene	130		7.723					ND	
65 Ethyl acrylate	55		7.848					ND	
66 Methylcyclohexane	83		7.960					ND	
67 1,2-Dichloropropane	63		7.997					ND	
70 1,4-Dioxane	88		8.082					ND	
69 Methyl methacrylate	69		8.086					ND	
68 Dibromomethane	93		8.088					ND	
71 Dichlorobromomethane	83		8.276					ND	
73 2-Chloroethyl vinyl ether	63		8.574					ND	
74 cis-1,3-Dichloropropene	75		8.720					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.872					ND	
76 Toluene	91		9.049					ND	
77 trans-1,3-Dichloropropene	75		9.298					ND	
78 Ethyl methacrylate	69		9.353					ND	
79 1,1,2-Trichloroethane	97		9.486					ND	
80 Tetrachloroethene	164		9.559					ND	
81 1,3-Dichloropropane	76		9.645					ND	
82 2-Hexanone	43		9.705					ND	
83 n-Butyl acetate	43		9.825					ND	
84 Chlorodibromomethane	129		9.857					ND	
85 Ethylene Dibromide	107		9.967					ND	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.435					ND	
87 Chlorobenzene	112		10.459					ND	
88 4-Chlorobenzotrifluoride	180		10.520					ND	
89 1,1,1,2-Tetrachloroethane	131		10.551					ND	
90 Ethylbenzene	106		10.557					ND	
91 m-Xylene & p-Xylene	106		10.684					ND	
92 o-Xylene	106		11.068					ND	
93 Styrene	104		11.092					ND	
94 Bromoform	173		11.274					ND	
95 Cyclohexanol	57		11.288					ND	
96 2-Chlorobenzotrifluoride	180		11.341					ND	
97 Isopropylbenzene	105		11.439					ND	
98 Cyclohexanone	55		11.528					ND	
100 Bromobenzene	156		11.749					ND	
99 1,1,2,2-Tetrachloroethane	83		11.749					ND	
102 trans-1,4-Dichloro-2-buten	53		11.785					ND	
101 1,2,3-Trichloropropane	110		11.803					ND	
103 N-Propylbenzene	120		11.852					ND	
104 2-Chlorotoluene	126		11.943					ND	
105 3-Chlorotoluene	126		12.004					ND	
106 1,3,5-Trimethylbenzene	105		12.035					ND	
107 4-Chlorotoluene	126		12.065					ND	
108 tert-Butylbenzene	119		12.351					ND	
110 1,2,4-Trimethylbenzene	105		12.412					ND	
111 1,2-dichloro-4-(trifluorom	214		12.454					ND	
112 sec-Butylbenzene	105		12.576					ND	
113 1,3-Dichlorobenzene	146		12.691					ND	
114 4-Isopropyltoluene	119		12.728					ND	
115 1,4-Dichlorobenzene	146		12.795					ND	
116 2,4-Dichloro-1-(triflourom	214		12.819					ND	
117 1,2,3-Trimethylbenzene	105		12.823					ND	
118 2,5-Dichlorobenzotrifluori	214		12.862					ND	
119 Benzyl chloride	91		12.908					ND	
120 n-Butylbenzene	91		13.141					ND	
121 1,2-Dichlorobenzene	146		13.147					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.938					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.084					ND	
124 1,3,5-Trichlorobenzene	180		14.130					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.504					ND	
126 1,2,4-Trichlorobenzene	180		14.765					ND	
127 Hexachlorobutadiene	225		14.911					ND	
128 Naphthalene	128	15.033	15.033	0.000	89	4523		0.5054	
129 1,2,3-Trichlorobenzene	180		15.258					ND	
131 2,4,5-Trichlorotoluene	159		16.024					ND	
130 2,3,6-Trichlorotoluene	159		16.121					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	
S 154 Total BTEX	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
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T 136 Mesityl oxide TIC	83		0.000						ND
T 153 1,2 Epoxybutane TIC	42		6.253						ND
T 137 Tetrahydrofuran TIC	42		6.253						ND

**Reagents:**

VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D05.D

Injection Date: 25-Oct-2017 23:51:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: MB

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

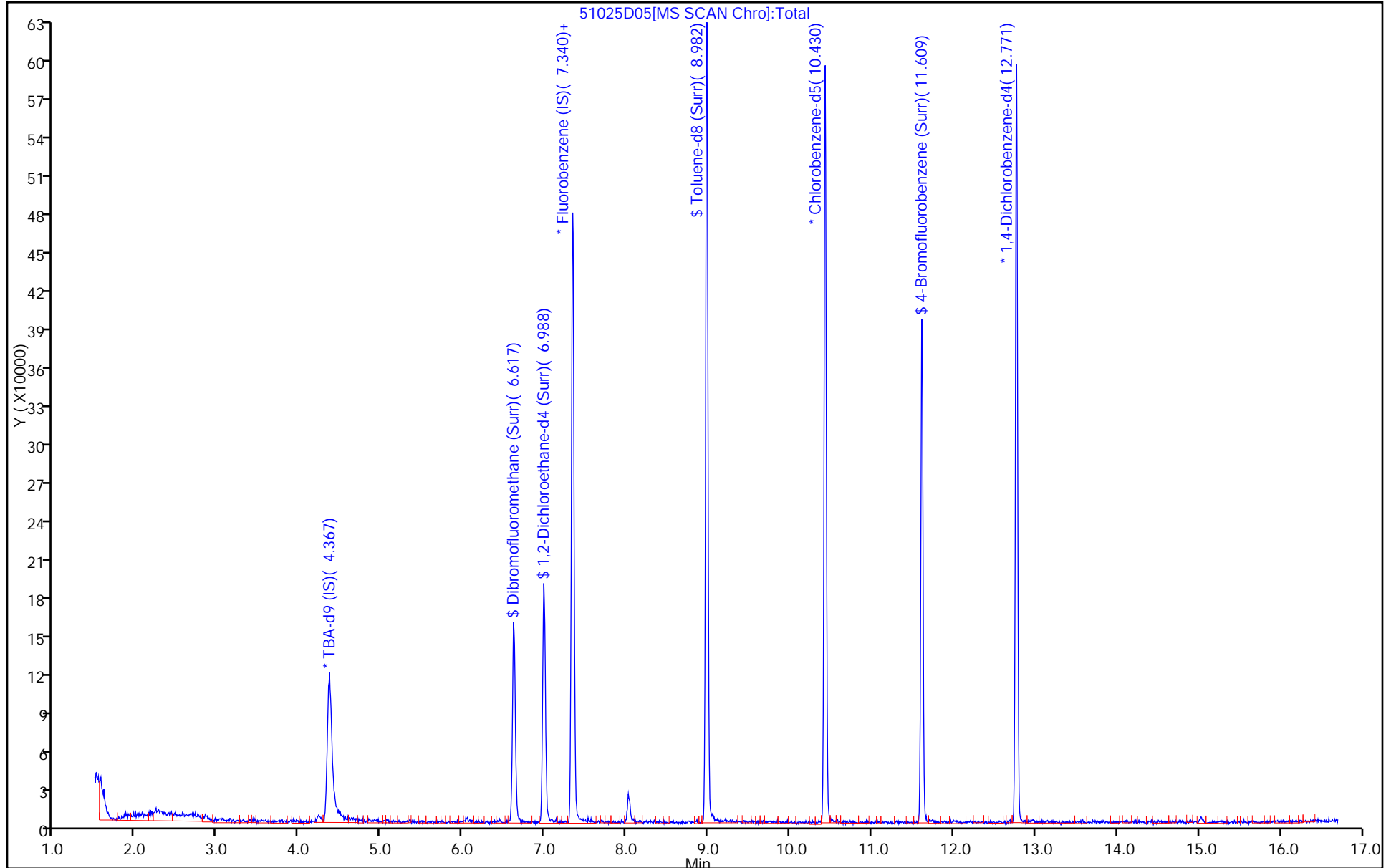
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D05.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 25-Oct-2017 23:51:30 ALS Bottle#: 5 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-005  
 Misc. Info.: MB  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf Date: 26-Oct-2017 00:14:50

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	52.5	104.98
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	54.7	109.39
\$ 7 Toluene-d8 (Surr)	50.0	47.0	94.01
\$ 8 4-Bromofluorobenzene (Surr)	50.0	46.0	92.02

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-226849/3  
 Matrix: Water Lab File ID: 51024D03.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 00:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	12.2		1.0	0.90
75-01-4	Vinyl chloride	9.94		1.0	0.88
74-83-9	Bromomethane	7.76		1.0	0.89
75-00-3	Chloroethane	9.73		1.0	0.90
75-35-4	1,1-Dichloroethene	9.89		1.0	0.55
67-64-1	Acetone	23.2		5.0	3.4
75-15-0	Carbon disulfide	9.22		1.0	0.88
75-09-2	Methylene Chloride	9.49		1.0	0.36
156-60-5	trans-1,2-Dichloroethene	9.15		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.12		1.0	0.59
75-34-3	1,1-Dichloroethane	9.88		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	9.10		1.0	0.71
74-97-5	Bromochloromethane	9.60		1.0	0.63
78-93-3	2-Butanone (MEK)	22.5		5.0	2.6
67-66-3	Chloroform	8.99		1.0	0.60
71-55-6	1,1,1-Trichloroethane	9.32		1.0	0.60
56-23-5	Carbon tetrachloride	9.38		1.0	0.88
71-43-2	Benzene	8.81		1.0	0.60
107-06-2	1,2-Dichloroethane	10.3		1.0	0.57
79-01-6	Trichloroethene	8.68		1.0	0.69
78-87-5	1,2-Dichloropropane	9.32		1.0	0.66
75-27-4	Bromodichloromethane	8.39		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	8.34		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	20.5		5.0	3.1
108-88-3	Toluene	9.25		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	9.10		1.0	0.58
79-00-5	1,1,2-Trichloroethane	9.51		1.0	0.45
127-18-4	Tetrachloroethene	8.59		1.0	0.47
591-78-6	2-Hexanone	19.6		5.0	3.3
124-48-1	Dibromochloromethane	9.26		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	9.05		1.0	0.50
108-90-7	Chlorobenzene	8.99		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	9.19		1.0	0.57
100-41-4	Ethylbenzene	8.74		1.0	0.51
1330-20-7	Xylenes, Total	17.7		2.0	0.89
100-42-5	Styrene	9.01		1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-226849/3  
 Matrix: Water Lab File ID: 51024D03.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 00:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 226849 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.13		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	8.90		1.0	0.60
107-13-1	Acrylonitrile	109		20	7.8
123-91-1	1,4-Dioxane	192	J	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		65-121
2037-26-5	Toluene-d8 (Surr)	94		73-120
460-00-4	4-Bromofluorobenzene (Surr)	90		80-120
1868-53-7	Dibromofluoromethane (Surr)	87		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D03.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 25-Oct-2017 00:03:30 ALS Bottle#: 3 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-003  
 Misc. Info.: LCS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 21:04:29 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf

Date: 25-Oct-2017 00:51:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.378	4.376	0.002	0	188196	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.334	7.331	0.003	97	489385	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.435	10.427	0.008	86	115905	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.770	12.768	0.002	93	167353	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.616	6.614	0.002	93	102898	50.0	43.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.987	6.985	0.002	0	136046	50.0	47.4	
\$ 7 Toluene-d8 (Surr)	98	8.982	8.979	0.003	93	435111	50.0	47.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.609	11.613	-0.004	86	149292	50.0	44.8	
11 Dichlorodifluoromethane	85	1.684	1.670	0.014	98	150968	50.0	53.1	
12 Chloromethane	50	1.897	1.895	0.002	99	173790	50.0	60.8	
14 Butadiene	39	2.012	2.010	0.002	94	170209	50.0	64.6	
13 Vinyl chloride	62	2.025	2.010	0.015	59	144294	50.0	49.7	
15 Bromomethane	94	2.335	2.332	0.003	91	53259	50.0	38.8	
16 Chloroethane	64	2.426	2.436	-0.010	99	77617	50.0	48.7	
17 Dichlorofluoromethane	67	2.760	2.752	0.008	97	213867	50.0	53.0	
18 Trichlorofluoromethane	101	2.803	2.795	0.008	91	183654	50.0	51.5	
20 Ethyl ether	59	3.131	3.123	0.008	95	137829	50.0	59.4	
21 Acrolein	56	3.308	3.312	-0.004	99	104409	150.0	178.6	
22 1,1-Dichloroethene	96	3.411	3.409	0.002	97	118431	50.0	49.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.496	3.494	0.002	94	130531	50.0	49.6	
24 Acetone	43	3.539	3.530	0.009	100	148495	100.0	116.0	
25 Iodomethane	142	3.618	3.610	0.008	99	187772	50.0	49.9	
26 Carbon disulfide	76	3.715	3.701	0.014	100	242436	50.0	46.1	
28 3-Chloro-1-propene	76	4.001	3.999	0.002	90	69430	50.0	44.8	
30 Methyl acetate	43	4.037	4.029	0.008	99	312281	100.0	123.2	
31 Methylene Chloride	84	4.226	4.230	-0.004	98	141267	50.0	47.4	
32 2-Methyl-2-propanol	59	4.506	4.510	-0.004	93	122938	500.0	552.4	
33 Acrylonitrile	53	4.609	4.607	0.002	99	670693	500.0	544.3	
34 trans-1,2-Dichloroethene	96	4.640	4.631	0.009	98	124951	50.0	45.8	
35 Methyl tert-butyl ether	73	4.664	4.656	0.008	98	333687	50.0	45.6	
36 Hexane	57	5.047	5.057	-0.010	96	184664	50.0	52.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.266	5.264	0.002	97	234485	50.0	49.4	
38 Vinyl acetate	43	5.321	5.318	0.003	97	189029	50.0	39.2	
44 2,2-Dichloropropane	97	6.008	6.000	0.008	60	28547	50.0	47.2	
45 cis-1,2-Dichloroethene	96	6.008	6.006	0.002	82	141998	50.0	45.5	
46 2-Butanone (MEK)	43	6.026	6.024	0.002	99	205400	100.0	112.7	
49 Chlorobromomethane	128	6.294	6.291	0.003	97	66607	50.0	48.0	
51 Tetrahydrofuran	42	6.312	6.310	0.002	92	102166	100.0	96.3	
52 Chloroform	83	6.434	6.437	-0.003	94	213082	50.0	45.0	
53 1,1,1-Trichloroethane	97	6.598	6.589	0.009	98	167169	50.0	46.6	
54 Cyclohexane	56	6.659	6.662	-0.004	94	226321	50.0	51.1	
56 Carbon tetrachloride	117	6.762	6.766	-0.004	97	140022	50.0	46.9	
55 1,1-Dichloropropene	75	6.780	6.778	0.002	91	159073	50.0	41.0	
57 Isobutyl alcohol	41	6.987	6.985	0.002	90	131882	1250.0	1354.3	
58 Benzene	78	6.993	6.997	-0.004	97	523950	50.0	44.0	
59 1,2-Dichloroethane	62	7.072	7.070	0.002	96	177937	50.0	51.3	
62 n-Heptane	43	7.352	7.350	0.002	93	163970	50.0	58.5	
64 Trichloroethene	130	7.723	7.721	0.002	97	129983	50.0	43.4	
66 Methylcyclohexane	83	7.960	7.958	0.002	94	184676	50.0	40.8	
67 1,2-Dichloropropane	63	7.990	7.994	-0.004	93	129131	50.0	46.6	
68 Dibromomethane	93	8.082	8.079	0.003	98	73317	50.0	45.2	
70 1,4-Dioxane	88	8.082	8.079	0.003	47	27030	1000.0	959.3	
71 Dichlorobromomethane	83	8.276	8.274	0.002	99	133692	50.0	41.9	
73 2-Chloroethyl vinyl ether	63	8.574	8.578	-0.004	92	173728	100.0	87.1	
74 cis-1,3-Dichloropropene	75	8.720	8.718	0.002	93	161388	50.0	41.7	
75 4-Methyl-2-pentanone (MIBK)	43	8.872	8.870	0.002	98	305030	100.0	102.6	
76 Toluene	91	9.048	9.046	0.002	98	534486	50.0	46.2	
77 trans-1,3-Dichloropropene	75	9.292	9.290	0.002	96	143047	50.0	45.5	
78 Ethyl methacrylate	69	9.353	9.356	-0.003	92	141747	50.0	37.4	
79 1,1,2-Trichloroethane	97	9.486	9.490	-0.004	90	114445	50.0	47.5	
80 Tetrachloroethene	164	9.559	9.557	0.002	96	94701	50.0	43.0	
81 1,3-Dichloropropane	76	9.644	9.642	0.002	97	195963	50.0	44.0	
82 2-Hexanone	43	9.705	9.703	0.002	98	223409	100.0	98.0	
84 Chlorodibromomethane	129	9.857	9.855	0.002	89	94239	50.0	46.3	
85 Ethylene Dibromide	107	9.973	9.971	0.002	96	111695	50.0	45.2	
86 3-Chlorobenzotrifluoride	180	10.435	10.433	0.002	89	214255	50.0	53.8	
87 Chlorobenzene	112	10.459	10.457	0.002	95	338311	50.0	45.0	
88 4-Chlorobenzotrifluoride	180	10.520	10.518	0.002	96	201941	50.0	54.9	
89 1,1,1,2-Tetrachloroethane	131	10.551	10.548	0.003	90	109970	50.0	46.0	
90 Ethylbenzene	106	10.557	10.561	-0.004	98	183637	50.0	43.7	
91 m-Xylene & p-Xylene	106	10.690	10.688	0.002	0	230861	50.0	45.0	
92 o-Xylene	106	11.067	11.071	-0.004	96	213085	50.0	43.6	
93 Styrene	104	11.092	11.090	0.002	96	372814	50.0	45.0	
94 Bromoform	173	11.268	11.272	-0.004	95	51383	50.0	40.6	
96 2-Chlorobenzotrifluoride	180	11.335	11.339	-0.004	95	208847	50.0	54.8	
97 Isopropylbenzene	105	11.438	11.436	0.002	96	525421	50.0	44.0	
100 Bromobenzene	156	11.749	11.746	0.003	95	135974	50.0	41.9	
99 1,1,2,2-Tetrachloroethane	83	11.755	11.752	0.003	82	158690	50.0	44.5	
102 trans-1,4-Dichloro-2-buten	53	11.785	11.789	-0.004	80	50770	50.0	51.8	
101 1,2,3-Trichloropropane	110	11.809	11.807	0.002	87	55750	50.0	41.6	
103 N-Propylbenzene	120	11.852	11.850	0.002	99	151220	50.0	40.7	
104 2-Chlorotoluene	126	11.937	11.935	0.002	96	131323	50.0	40.9	
105 3-Chlorotoluene	126	12.004	12.002	0.002	97	170951	50.0	49.0	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	12.034	12.038	-0.004	94	451833	50.0	42.5	
107 4-Chlorotoluene	126	12.065	12.063	0.002	96	143187	50.0	41.3	
108 tert-Butylbenzene	119	12.351	12.348	0.003	94	347281	50.0	39.1	
110 1,2,4-Trimethylbenzene	105	12.411	12.409	0.002	97	453903	50.0	42.0	
111 1,2-dichloro-4-(trifluorom	214	12.454	12.452	0.002	94	122161	50.0	45.2	
112 sec-Butylbenzene	105	12.576	12.573	0.003	94	500820	50.0	40.4	
113 1,3-Dichlorobenzene	146	12.691	12.689	0.002	99	255781	50.0	44.1	
114 4-Isopropyltoluene	119	12.728	12.732	-0.004	97	434155	50.0	42.1	
115 1,4-Dichlorobenzene	146	12.795	12.798	-0.003	96	268897	50.0	45.1	
116 2,4-Dichloro-1-(trifluorom	214	12.825	12.823	0.002	94	114432	50.0	45.4	
118 2,5-Dichlorobenzotrifluori	214	12.861	12.865	-0.004	0	122999	50.0	45.2	
120 n-Butylbenzene	91	13.135	13.139	-0.004	98	340969	50.0	40.5	
121 1,2-Dichlorobenzene	146	13.153	13.151	0.002	97	253787	50.0	45.9	
122 1,2-Dibromo-3-Chloropropan	75	13.938	13.936	0.002	75	24063	50.0	39.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.084	14.088	-0.004	0	563277	150.0	160.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.503	14.501	0.002	0	390054	100.0	107.5	
126 1,2,4-Trichlorobenzene	180	14.765	14.763	0.002	94	114088	50.0	45.1	
127 Hexachlorobutadiene	225	14.905	14.909	-0.004	95	41432	50.0	44.7	
128 Naphthalene	128	15.033	15.030	0.002	97	387225	50.0	44.9	
129 1,2,3-Trichlorobenzene	180	15.258	15.255	0.003	95	103948	50.0	45.0	
131 2,4,5-Trichlorotoluene	159	16.024	16.028	-0.004	0	55740	50.0	50.7	
130 2,3,6-Trichlorotoluene	159	16.127	16.119	0.008	93	55787	50.0	54.6	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	91.2	
S 133 Xylenes, Total	106				0		100.0	88.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	87.2	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

## Reagents:

voaWEEmix1stR_00014	Amount Added: 2.00	Units: uL	
voaWKetmix1st_00006	Amount Added: 2.00	Units: uL	
voaWVA1stRest_00021	Amount Added: 2.00	Units: uL	
voaWAcro1stRe_00021	Amount Added: 6.00	Units: uL	
VOA8260VOAPRI_00268	Amount Added: 2.00	Units: uL	
voaW2clev1stR_00023	Amount Added: 2.00	Units: uL	
VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D03.D

Injection Date: 25-Oct-2017 00:03:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: LCS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

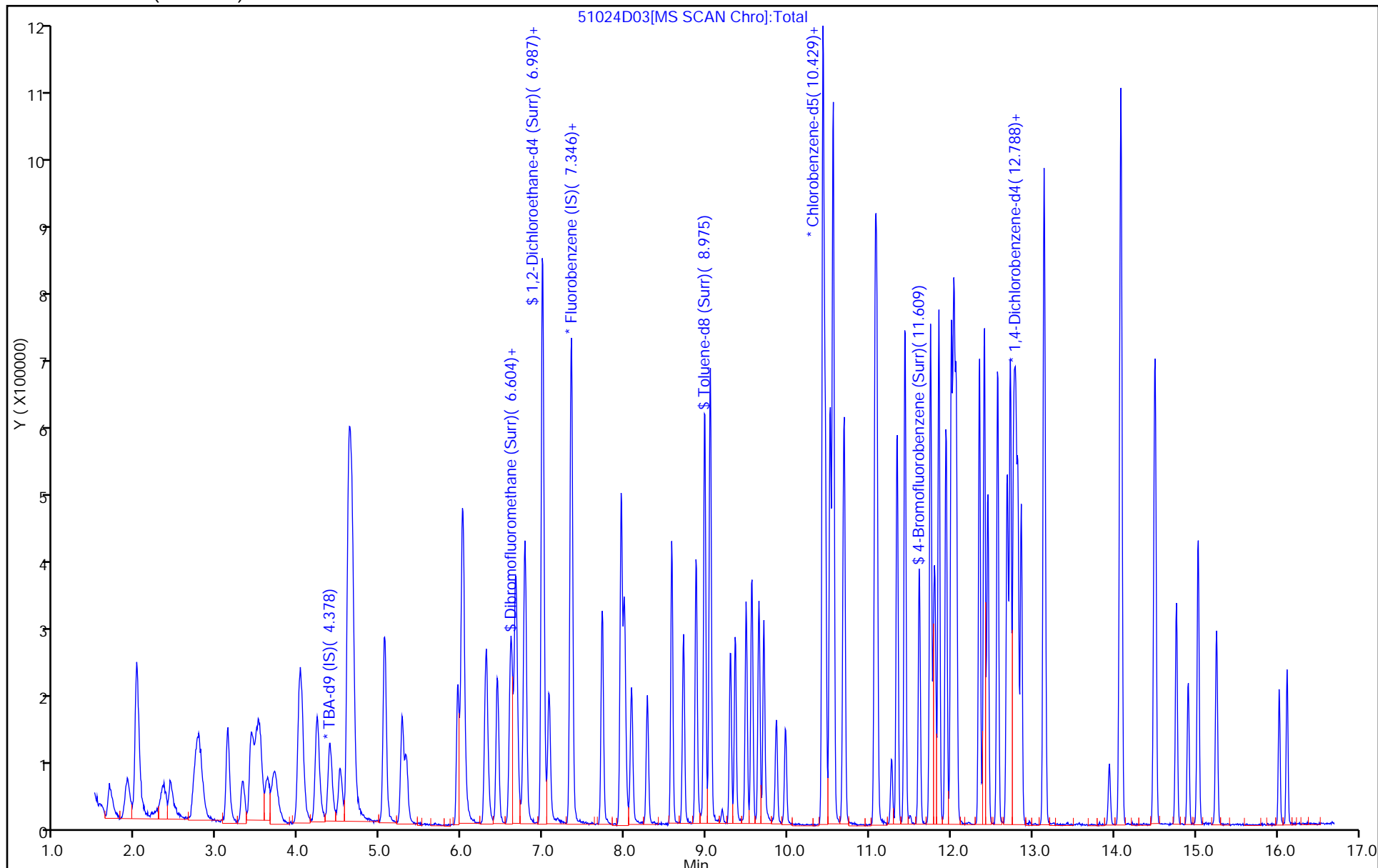
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\51024D03.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 25-Oct-2017 00:03:30 ALS Bottle#: 3 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019014-003  
 Misc. Info.: LCS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171024-19014.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 25-Oct-2017 21:04:29 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK020

First Level Reviewer: bungardf Date: 25-Oct-2017 00:51:47

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	43.7	87.40
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	47.4	94.74
\$ 7 Toluene-d8 (Surr)	50.0	47.2	94.34
\$ 8 4-Bromofluorobenzene (Surr)	50.0	44.8	89.62

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-227010/3  
 Matrix: Water Lab File ID: 51025D03.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 22:51  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13.7		1.0	0.90
75-01-4	Vinyl chloride	10.6		1.0	0.88
74-83-9	Bromomethane	6.88		1.0	0.89
75-00-3	Chloroethane	9.57		1.0	0.90
75-35-4	1,1-Dichloroethene	10.2		1.0	0.55
67-64-1	Acetone	26.4		5.0	3.4
75-15-0	Carbon disulfide	10.0		1.0	0.88
75-09-2	Methylene Chloride	9.78		1.0	0.36
156-60-5	trans-1,2-Dichloroethene	10.0		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.29		1.0	0.59
75-34-3	1,1-Dichloroethane	10.2		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	9.49		1.0	0.71
74-97-5	Bromochloromethane	9.54		1.0	0.63
78-93-3	2-Butanone (MEK)	23.5		5.0	2.6
67-66-3	Chloroform	9.19		1.0	0.60
71-55-6	1,1,1-Trichloroethane	9.70		1.0	0.60
56-23-5	Carbon tetrachloride	9.92		1.0	0.88
71-43-2	Benzene	9.20		1.0	0.60
107-06-2	1,2-Dichloroethane	10.1		1.0	0.57
79-01-6	Trichloroethene	8.92		1.0	0.69
78-87-5	1,2-Dichloropropane	9.45		1.0	0.66
75-27-4	Bromodichloromethane	8.92		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	8.58		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	22.0		5.0	3.1
108-88-3	Toluene	9.90		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	9.64		1.0	0.58
79-00-5	1,1,2-Trichloroethane	9.41		1.0	0.45
127-18-4	Tetrachloroethene	9.21		1.0	0.47
591-78-6	2-Hexanone	21.8		5.0	3.3
124-48-1	Dibromochloromethane	9.57		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	9.35		1.0	0.50
108-90-7	Chlorobenzene	9.41		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	9.79		1.0	0.57
100-41-4	Ethylbenzene	9.66		1.0	0.51
1330-20-7	Xylenes, Total	19.0		2.0	0.89
100-42-5	Styrene	9.79		1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-227010/3  
 Matrix: Water Lab File ID: 51025D03.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/25/2017 22:51  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.10		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	8.53		1.0	0.60
107-13-1	Acrylonitrile	106		20	7.8
123-91-1	1,4-Dioxane	190	J	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		65-121
2037-26-5	Toluene-d8 (Surr)	95		73-120
460-00-4	4-Bromofluorobenzene (Surr)	93		80-120
1868-53-7	Dibromofluoromethane (Surr)	90		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D03.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 25-Oct-2017 22:51:30 ALS Bottle#: 3 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-003  
 Misc. Info.: LCS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 25-Oct-2017 23:15:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.388	4.384	0.004	0	196941	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.337	7.340	-0.003	97	509802	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.433	10.429	0.004	86	118325	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.768	12.770	-0.002	95	167377	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.620	6.610	0.010	92	109875	50.0	44.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.984	6.987	-0.003	0	139062	50.0	46.5	
\$ 7 Toluene-d8 (Surr)	98	8.979	8.982	-0.003	94	448374	50.0	47.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.612	11.609	0.003	85	158536	50.0	46.6	
11 Dichlorodifluoromethane	85	1.682	1.684	-0.002	98	160641	50.0	54.2	
12 Chloromethane	50	1.907	1.891	0.016	99	204449	50.0	68.6	
14 Butadiene	39	2.010	2.012	-0.002	94	194044	50.0	70.6	
13 Vinyl chloride	62	2.022	2.012	0.010	93	159555	50.0	52.8	
15 Bromomethane	94	2.332	2.335	-0.003	90	49191	50.0	34.4	
16 Chloroethane	64	2.430	2.426	0.004	98	79480	50.0	47.8	
17 Dichlorofluoromethane	67	2.752	2.760	-0.008	81	239147	50.0	56.9	
18 Trichlorofluoromethane	101	2.794	2.791	0.003	94	212029	50.0	57.1	
20 Ethyl ether	59	3.135	3.131	0.004	95	146736	50.0	60.7	
21 Acrolein	56	3.311	3.314	-0.003	98	109886	150.0	180.5	
22 1,1-Dichloroethene	96	3.415	3.411	0.004	96	127323	50.0	51.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.494	3.496	-0.002	92	143178	50.0	52.3	
24 Acetone	43	3.536	3.539	-0.003	98	175710	100.0	131.8	
25 Iodomethane	142	3.615	3.612	0.003	97	204988	50.0	52.3	
26 Carbon disulfide	76	3.701	3.703	-0.002	99	274732	50.0	50.2	
28 3-Chloro-1-propene	76	3.999	4.001	-0.002	90	74395	50.0	46.1	
30 Methyl acetate	43	4.041	4.038	0.003	99	298106	100.0	112.9	
31 Methylene Chloride	84	4.224	4.226	-0.002	96	151361	50.0	48.9	
32 2-Methyl-2-propanol	59	4.515	4.506	0.009	93	121679	500.0	522.4	
33 Acrylonitrile	53	4.613	4.609	0.004	100	679600	500.0	529.4	
34 trans-1,2-Dichloroethene	96	4.643	4.640	0.003	97	142906	50.0	50.2	
35 Methyl tert-butyl ether	73	4.655	4.664	-0.009	97	354237	50.0	46.5	
36 Hexane	57	5.057	5.053	0.004	95	208347	50.0	57.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.270	5.266	0.004	97	251171	50.0	50.8	
38 Vinyl acetate	43	5.318	5.321	-0.003	97	275068	50.0	54.7	
44 2,2-Dichloropropane	97	5.999	6.008	-0.009	64	35718	50.0	56.7	
45 cis-1,2-Dichloroethene	96	6.005	6.008	-0.003	82	154405	50.0	47.5	
46 2-Butanone (MEK)	43	6.024	6.026	-0.002	99	222686	100.0	117.3	
49 Chlorobromomethane	128	6.291	6.288	0.003	97	68945	50.0	47.7	
51 Tetrahydrofuran	42	6.303	6.306	-0.003	90	106264	100.0	96.2	
52 Chloroform	83	6.437	6.434	0.003	94	226846	50.0	45.9	
53 1,1,1-Trichloroethane	97	6.595	6.592	0.003	98	181294	50.0	48.5	
54 Cyclohexane	56	6.668	6.659	0.009	94	255401	50.0	55.4	
56 Carbon tetrachloride	117	6.759	6.762	-0.003	96	154314	50.0	49.6	
55 1,1-Dichloropropene	75	6.784	6.780	0.004	94	189029	50.0	46.8	
57 Isobutyl alcohol	41	6.984	6.987	-0.003	89	121345	1250.0	1196.2	
58 Benzene	78	6.997	6.993	0.004	97	570420	50.0	46.0	
59 1,2-Dichloroethane	62	7.070	7.072	-0.002	95	182426	50.0	50.5	
62 n-Heptane	43	7.349	7.352	-0.003	92	177720	50.0	60.9	
64 Trichloroethene	130	7.720	7.723	-0.003	97	139091	50.0	44.6	
66 Methylcyclohexane	83	7.957	7.960	-0.003	96	203923	50.0	43.2	
67 1,2-Dichloropropane	63	7.994	7.997	-0.003	93	136433	50.0	47.3	
70 1,4-Dioxane	88	8.079	8.082	-0.003	49	27930	1000.0	951.6	
68 Dibromomethane	93	8.079	8.088	-0.009	98	75328	50.0	44.5	
71 Dichlorobromomethane	83	8.274	8.276	-0.002	99	147989	50.0	44.6	
73 2-Chloroethyl vinyl ether	63	8.578	8.574	0.004	91	170077	100.0	81.9	
74 cis-1,3-Dichloropropene	75	8.718	8.720	-0.002	93	173010	50.0	42.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.876	8.872	0.004	98	334461	100.0	110.2	
76 Toluene	91	9.046	9.049	-0.003	99	583811	50.0	49.5	
77 trans-1,3-Dichloropropene	75	9.295	9.298	-0.003	97	154800	50.0	48.2	
78 Ethyl methacrylate	69	9.356	9.353	0.003	94	148831	50.0	38.4	
79 1,1,2-Trichloroethane	97	9.490	9.486	0.004	92	115585	50.0	47.0	
80 Tetrachloroethene	164	9.557	9.559	-0.002	96	103580	50.0	46.0	
81 1,3-Dichloropropane	76	9.642	9.645	-0.003	99	198434	50.0	43.7	
82 2-Hexanone	43	9.703	9.705	-0.002	98	253628	100.0	109.0	
84 Chlorodibromomethane	129	9.861	9.857	0.004	88	99435	50.0	47.9	
85 Ethylene Dibromide	107	9.970	9.967	0.003	95	117880	50.0	46.8	
86 3-Chlorobenzotrifluoride	180	10.433	10.435	-0.002	87	210238	50.0	51.7	
87 Chlorobenzene	112	10.457	10.459	-0.002	95	361332	50.0	47.0	
88 4-Chlorobenzotrifluoride	180	10.518	10.520	-0.002	95	195652	50.0	52.1	
89 1,1,1,2-Tetrachloroethane	131	10.548	10.551	-0.003	95	119538	50.0	48.9	
90 Ethylbenzene	106	10.554	10.557	-0.003	98	207073	50.0	48.3	
91 m-Xylene & p-Xylene	106	10.688	10.684	0.004	0	251197	50.0	47.9	
92 o-Xylene	106	11.071	11.068	0.003	96	235384	50.0	47.1	
93 Styrene	104	11.089	11.092	-0.003	95	413632	50.0	48.9	
94 Bromoform	173	11.272	11.274	-0.002	95	52279	50.0	40.5	
96 2-Chlorobenzotrifluoride	180	11.339	11.341	-0.002	95	203107	50.0	52.2	
97 Isopropylbenzene	105	11.436	11.439	-0.003	96	589857	50.0	48.4	
100 Bromobenzene	156	11.752	11.749	0.003	95	148605	50.0	45.7	
99 1,1,2,2-Tetrachloroethane	83	11.752	11.749	0.003	83	155198	50.0	42.6	
102 trans-1,4-Dichloro-2-buten	53	11.789	11.785	0.004	80	49462	50.0	50.5	
101 1,2,3-Trichloropropane	110	11.807	11.803	0.004	86	54038	50.0	40.3	
103 N-Propylbenzene	120	11.856	11.852	0.004	98	171459	50.0	46.2	
104 2-Chlorotoluene	126	11.941	11.943	-0.002	96	143767	50.0	44.8	
105 3-Chlorotoluene	126	12.008	12.004	0.004	97	180742	50.0	51.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	12.038	12.035	0.003	93	507038	50.0	47.7	
107 4-Chlorotoluene	126	12.068	12.065	0.003	97	155397	50.0	44.8	
108 tert-Butylbenzene	119	12.348	12.351	-0.003	94	389252	50.0	43.8	
110 1,2,4-Trimethylbenzene	105	12.409	12.412	-0.003	97	500494	50.0	46.4	
111 1,2-dichloro-4-(trifluorom	214	12.458	12.454	0.004	94	121648	50.0	45.0	
112 sec-Butylbenzene	105	12.573	12.576	-0.003	94	553703	50.0	44.7	
113 1,3-Dichlorobenzene	146	12.689	12.691	-0.002	97	270257	50.0	46.6	
114 4-Isopropyltoluene	119	12.731	12.728	0.003	97	476245	50.0	46.1	
115 1,4-Dichlorobenzene	146	12.792	12.795	-0.003	96	278840	50.0	46.8	
116 2,4-Dichloro-1-(trifluorom	214	12.823	12.819	0.004	94	110740	50.0	44.0	
118 2,5-Dichlorobenzotrifluori	214	12.865	12.862	0.003	0	125465	50.0	46.1	
120 n-Butylbenzene	91	13.139	13.141	-0.002	98	372017	50.0	44.2	
121 1,2-Dichlorobenzene	146	13.151	13.147	0.004	97	264704	50.0	47.8	
122 1,2-Dibromo-3-Chloropropan	75	13.942	13.938	0.004	80	24228	50.0	39.4	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.081	14.084	-0.003	0	560568	150.0	159.7	
125 2,3- & 3,4- Dichlorotoluen	125	14.507	14.504	0.003	0	391848	100.0	108.0	
126 1,2,4-Trichlorobenzene	180	14.763	14.765	-0.003	95	119866	50.0	47.3	
127 Hexachlorobutadiene	225	14.908	14.911	-0.003	95	43688	50.0	47.2	
128 Naphthalene	128	15.030	15.033	-0.003	97	386467	50.0	44.8	
129 1,2,3-Trichlorobenzene	180	15.255	15.258	-0.003	95	107076	50.0	46.3	
131 2,4,5-Trichlorotoluene	159	16.027	16.024	0.003	0	51565	50.0	46.9	
130 2,3,6-Trichlorotoluene	159	16.125	16.121	0.004	97	54972	50.0	53.8	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	97.7	
S 133 Xylenes, Total	106				0		100.0	95.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	91.1	

### QC Flag Legend

#### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWEEmix1stR_00014	Amount Added: 2.00	Units: uL	
voaWKetmix1st_00006	Amount Added: 2.00	Units: uL	
voaWVA1stRest_00021	Amount Added: 2.00	Units: uL	
voaWAcro1stRe_00021	Amount Added: 6.00	Units: uL	
VOA8260VOAPRI_00268	Amount Added: 2.00	Units: uL	
voaW2clev1stR_00023	Amount Added: 2.00	Units: uL	
VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D03.D

Injection Date: 25-Oct-2017 22:51:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: LCS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

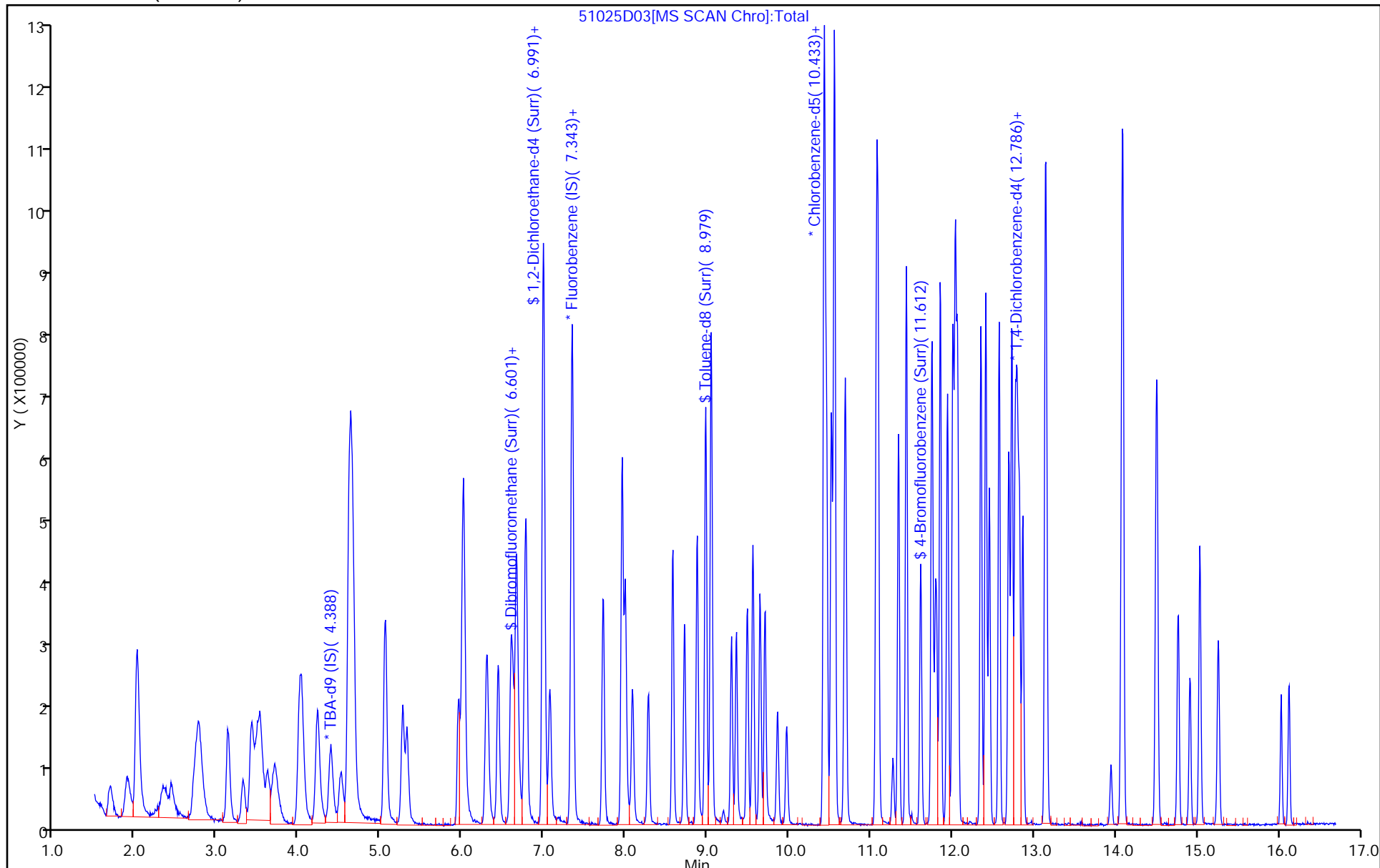
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D03.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 25-Oct-2017 22:51:30 ALS Bottle#: 3 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-003  
 Misc. Info.: LCS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:41:12 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf Date: 25-Oct-2017 23:15:37

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	44.8	89.59
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	46.5	92.96
\$ 7 Toluene-d8 (Surr)	50.0	47.6	95.22
\$ 8 4-Bromofluorobenzene (Surr)	50.0	46.6	93.23

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102S-0/1-0 MS Lab Sample ID: 180-71467-4 MS  
 Matrix: Water Lab File ID: 51025D07.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:08  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 00:55  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13.6		1.0	0.90
75-01-4	Vinyl chloride	11.4		1.0	0.88
74-83-9	Bromomethane	8.45		1.0	0.89
75-00-3	Chloroethane	10.1		1.0	0.90
75-35-4	1,1-Dichloroethene	14.1		1.0	0.55
67-64-1	Acetone	58.7		5.0	3.4
75-15-0	Carbon disulfide	10.1		1.0	0.88
75-09-2	Methylene Chloride	9.53		1.0	0.36
156-60-5	trans-1,2-Dichloroethene	9.89		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.34		1.0	0.59
75-34-3	1,1-Dichloroethane	11.3		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	15.3		1.0	0.71
74-97-5	Bromochloromethane	9.90		1.0	0.63
78-93-3	2-Butanone (MEK)	20.2		5.0	2.6
67-66-3	Chloroform	9.37		1.0	0.60
71-55-6	1,1,1-Trichloroethane	14.2		1.0	0.60
56-23-5	Carbon tetrachloride	10.4		1.0	0.88
71-43-2	Benzene	9.43		1.0	0.60
107-06-2	1,2-Dichloroethane	10.3		1.0	0.57
79-01-6	Trichloroethene	28.0		1.0	0.69
78-87-5	1,2-Dichloropropane	9.54		1.0	0.66
75-27-4	Bromodichloromethane	8.75		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	8.51		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	21.5		5.0	3.1
108-88-3	Toluene	10.3		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	9.83		1.0	0.58
79-00-5	1,1,2-Trichloroethane	9.71		1.0	0.45
127-18-4	Tetrachloroethene	21.5		1.0	0.47
591-78-6	2-Hexanone	19.3		5.0	3.3
124-48-1	Dibromochloromethane	9.80		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	9.24		1.0	0.50
108-90-7	Chlorobenzene	9.96		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	10.2		1.0	0.57
100-41-4	Ethylbenzene	9.78		1.0	0.51
1330-20-7	Xylenes, Total	19.8		2.0	0.89
100-42-5	Styrene	9.94		1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102S-0/1-0 MS Lab Sample ID: 180-71467-4 MS  
 Matrix: Water Lab File ID: 51025D07.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:08  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 00:55  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.95		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	9.04		1.0	0.60
107-13-1	Acrylonitrile	109		20	7.8
123-91-1	1,4-Dioxane	192	J	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		65-121
2037-26-5	Toluene-d8 (Surr)	90		73-120
460-00-4	4-Bromofluorobenzene (Surr)	91		80-120
1868-53-7	Dibromofluoromethane (Surr)	85		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D07.D  
 Lims ID: 180-71467-C-4 MS  
 Client ID: HD-MW-102S-0/1-0  
 Sample Type: MS  
 Inject. Date: 26-Oct-2017 00:55:30 ALS Bottle#: 7 Worklist Smp#: 7  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-007  
 Misc. Info.: 180-71467-C-4 MS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:50:55 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 01:16:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.384	4.384	0.000	0	193191	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.333	7.340	-0.007	97	493235	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.429	10.429	0.000	86	107512	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.770	12.770	0.000	93	158099	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.616	6.610	0.006	92	100383	50.0	42.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.981	6.987	-0.006	0	132636	50.0	45.8	
\$ 7 Toluene-d8 (Surr)	98	8.982	8.982	0.000	94	385605	50.0	45.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.609	11.609	0.000	85	140661	50.0	45.5	
11 Dichlorodifluoromethane	85	1.678	1.684	-0.006	99	146996	50.0	51.3	
12 Chloromethane	50	1.897	1.891	0.006	99	195996	50.0	68.0	
14 Butadiene	39	2.006	2.012	-0.006	96	199759	50.0	75.2	
13 Vinyl chloride	62	2.024	2.012	0.012	94	167072	50.0	57.1	
15 Bromomethane	94	2.335	2.335	0.000	90	58428	50.0	42.2	
16 Chloroethane	64	2.432	2.426	0.006	99	81500	50.0	50.7	
17 Dichlorofluoromethane	67	2.748	2.760	-0.012	82	240809	50.0	59.2	
18 Trichlorofluoromethane	101	2.760	2.791	-0.031	98	220439	50.0	61.3	M
20 Ethyl ether	59	3.125	3.131	-0.006	97	139315	50.0	59.6	
21 Acrolein	56	3.314	3.314	0.000	97	103330	150.0	175.4	
22 1,1-Dichloroethene	96	3.411	3.411	0.000	98	170188	50.0	70.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.496	3.496	0.000	91	140737	50.0	53.1	
24 Acetone	43	3.533	3.539	-0.006	99	378704	100.0	293.6	
25 Iodomethane	142	3.618	3.612	0.006	97	202925	50.0	53.5	
26 Carbon disulfide	76	3.709	3.703	0.006	100	267947	50.0	50.6	
28 3-Chloro-1-propene	76	4.001	4.001	0.000	90	72047	50.0	46.2	
30 Methyl acetate	43	4.031	4.038	-0.007	99	291496	100.0	114.1	
31 Methylene Chloride	84	4.220	4.226	-0.006	98	142934	50.0	47.6	
32 2-Methyl-2-propanol	59	4.512	4.506	0.006	92	137560	500.0	602.1	
33 Acrylonitrile	53	4.609	4.609	0.000	100	674431	500.0	543.0	
34 trans-1,2-Dichloroethene	96	4.633	4.640	-0.007	98	136132	50.0	49.5	
35 Methyl tert-butyl ether	73	4.664	4.664	0.000	97	344479	50.0	46.7	
36 Hexane	57	5.059	5.053	0.006	96	195243	50.0	55.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.266	5.266	0.000	96	269612	50.0	56.4	
38 Vinyl acetate	43	5.314	5.321	-0.007	98	253425	50.0	52.1	
44 2,2-Dichloropropane	97	6.014	6.008	0.006	52	39390	50.0	64.7	
45 cis-1,2-Dichloroethene	96	6.008	6.008	0.000	82	240013	50.0	76.3	
46 2-Butanone (MEK)	43	6.020	6.026	-0.006	99	185192	100.0	100.9	
49 Chlorobromomethane	128	6.294	6.288	0.006	97	69229	50.0	49.5	
51 Tetrahydrofuran	42	6.312	6.306	0.006	91	100843	100.0	94.3	
52 Chloroform	83	6.440	6.434	0.006	93	223734	50.0	46.8	
53 1,1,1-Trichloroethane	97	6.592	6.592	0.000	98	256121	50.0	70.8	
54 Cyclohexane	56	6.665	6.659	0.006	94	252265	50.0	56.5	
56 Carbon tetrachloride	117	6.762	6.762	0.000	97	156202	50.0	51.9	
55 1,1-Dichloropropene	75	6.780	6.780	0.000	91	179349	50.0	45.9	
57 Isobutyl alcohol	41	6.987	6.987	0.000	89	116751	1250.0	1189.6	
58 Benzene	78	6.999	6.993	0.006	98	565382	50.0	47.1	
59 1,2-Dichloroethane	62	7.072	7.072	0.000	96	179458	50.0	51.3	
62 n-Heptane	43	7.352	7.352	0.000	92	171006	50.0	60.6	
64 Trichloroethene	130	7.723	7.723	0.000	98	423135	50.0	140.2	
66 Methylcyclohexane	83	7.954	7.960	-0.006	95	208535	50.0	45.7	
67 1,2-Dichloropropane	63	7.996	7.997	-0.001	93	133195	50.0	47.7	
70 1,4-Dioxane	88	8.081	8.082	-0.001	47	27222	1000.0	958.6	
68 Dibromomethane	93	8.088	8.088	0.000	96	72733	50.0	44.4	
71 Dichlorobromomethane	83	8.276	8.276	0.000	98	140492	50.0	43.7	
73 2-Chloroethyl vinyl ether	63	8.580	8.574	0.006	94	31052	100.0	15.5	
74 cis-1,3-Dichloropropene	75	8.720	8.720	0.000	92	166057	50.0	42.6	
75 4-Methyl-2-pentanone (MIBK)	43	8.872	8.872	0.000	99	296104	100.0	107.4	
76 Toluene	91	9.048	9.049	-0.001	99	553109	50.0	51.6	
77 trans-1,3-Dichloropropene	75	9.292	9.298	-0.006	97	143437	50.0	49.2	
78 Ethyl methacrylate	69	9.352	9.353	-0.001	91	140132	50.0	39.8	
79 1,1,2-Trichloroethane	97	9.486	9.486	0.000	93	108478	50.0	48.6	
80 Tetrachloroethene	164	9.559	9.559	0.000	95	219737	50.0	107.5	
81 1,3-Dichloropropane	76	9.644	9.645	-0.001	97	185798	50.0	45.0	
82 2-Hexanone	43	9.705	9.705	0.000	99	204520	100.0	96.7	
84 Chlorodibromomethane	129	9.857	9.857	0.000	90	92502	50.0	49.0	
85 Ethylene Dibromide	107	9.973	9.967	0.006	98	105841	50.0	46.2	
86 3-Chlorobenzotrifluoride	180	10.435	10.435	0.000	91	208793	50.0	56.5	
87 Chlorobenzene	112	10.459	10.459	0.000	95	347525	50.0	49.8	
88 4-Chlorobenzotrifluoride	180	10.520	10.520	0.000	96	199436	50.0	58.5	
89 1,1,1,2-Tetrachloroethane	131	10.551	10.551	-0.001	92	113309	50.0	51.1	
90 Ethylbenzene	106	10.557	10.557	0.000	98	190564	50.0	48.9	
91 m-Xylene & p-Xylene	106	10.684	10.684	0.000	0	239102	50.0	50.2	
92 o-Xylene	106	11.067	11.068	-0.001	96	221531	50.0	48.8	
93 Styrene	104	11.092	11.092	0.000	95	381531	50.0	49.7	
94 Bromoform	173	11.274	11.274	0.000	95	52513	50.0	44.8	
96 2-Chlorobenzotrifluoride	180	11.341	11.341	0.000	94	197147	50.0	55.8	
97 Isopropylbenzene	105	11.438	11.439	-0.001	96	556790	50.0	50.3	
100 Bromobenzene	156	11.749	11.749	0.000	94	137567	50.0	44.8	
99 1,1,2,2-Tetrachloroethane	83	11.749	11.749	0.000	82	149436	50.0	45.2	
102 trans-1,4-Dichloro-2-buten	53	11.785	11.785	0.000	83	48921	50.0	52.9	
101 1,2,3-Trichloropropane	110	11.809	11.803	0.006	87	52370	50.0	41.4	
103 N-Propylbenzene	120	11.852	11.852	0.000	98	163946	50.0	46.8	
104 2-Chlorotoluene	126	11.943	11.943	0.000	96	136596	50.0	45.1	
105 3-Chlorotoluene	126	12.004	12.004	0.000	97	169994	50.0	51.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	12.034	12.035	-0.001	94	471953	50.0	47.0	
107 4-Chlorotoluene	126	12.065	12.065	0.000	96	148442	50.0	45.4	
108 tert-Butylbenzene	119	12.351	12.351	0.000	94	374392	50.0	44.6	
110 1,2,4-Trimethylbenzene	105	12.405	12.412	-0.007	97	471096	50.0	46.2	
111 1,2-dichloro-4-(trifluorom	214	12.454	12.454	0.000	95	122771	50.0	48.0	
112 sec-Butylbenzene	105	12.570	12.576	-0.006	94	534973	50.0	45.7	
113 1,3-Dichlorobenzene	146	12.691	12.691	0.000	98	259818	50.0	47.4	
114 4-Isopropyltoluene	119	12.728	12.728	0.000	97	453852	50.0	46.6	
115 1,4-Dichlorobenzene	146	12.795	12.795	0.000	96	267037	50.0	47.4	
116 2,4-Dichloro-1-(trifluorom	214	12.819	12.819	0.000	93	114535	50.0	48.1	
118 2,5-Dichlorobenzotrifluori	214	12.861	12.862	-0.001	0	122360	50.0	47.6	
120 n-Butylbenzene	91	13.135	13.141	-0.006	97	360867	50.0	45.4	
121 1,2-Dichlorobenzene	146	13.153	13.147	0.006	97	254196	50.0	48.6	
122 1,2-Dibromo-3-Chloropropan	75	13.944	13.938	0.006	81	23939	50.0	41.3	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.084	14.084	0.000	0	548381	150.0	165.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.503	14.504	-0.001	0	382457	100.0	111.6	
126 1,2,4-Trichlorobenzene	180	14.765	14.765	0.000	94	112448	50.0	47.0	
127 Hexachlorobutadiene	225	14.911	14.911	0.000	95	40089	50.0	45.8	
128 Naphthalene	128	15.032	15.033	-0.001	97	372078	50.0	45.7	
129 1,2,3-Trichlorobenzene	180	15.257	15.258	-0.001	97	104772	50.0	48.0	
131 2,4,5-Trichlorotoluene	159	16.030	16.024	0.006	0	48492	50.0	46.7	
130 2,3,6-Trichlorotoluene	159	16.121	16.121	0.000	96	50107	50.0	51.9	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	125.7	
S 133 Xylenes, Total	106				0		100.0	99.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	91.7	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

voaWEEmix1stR_00014	Amount Added: 2.00	Units: uL	
voaWVA1stRest_00021	Amount Added: 2.00	Units: uL	
voaWAcro1stRe_00021	Amount Added: 6.00	Units: uL	
VOA8260VOAPRI_00268	Amount Added: 2.00	Units: uL	
voaW2clev1stR_00023	Amount Added: 2.00	Units: uL	
voaWKet2ndRes_00022	Amount Added: 2.00	Units: uL	
VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D07.D

Injection Date: 26-Oct-2017 00:55:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-C-4 MS

Worklist Smp#: 7

Client ID: HD-MW-102S-0/1-0

Purge Vol: 5.000 mL

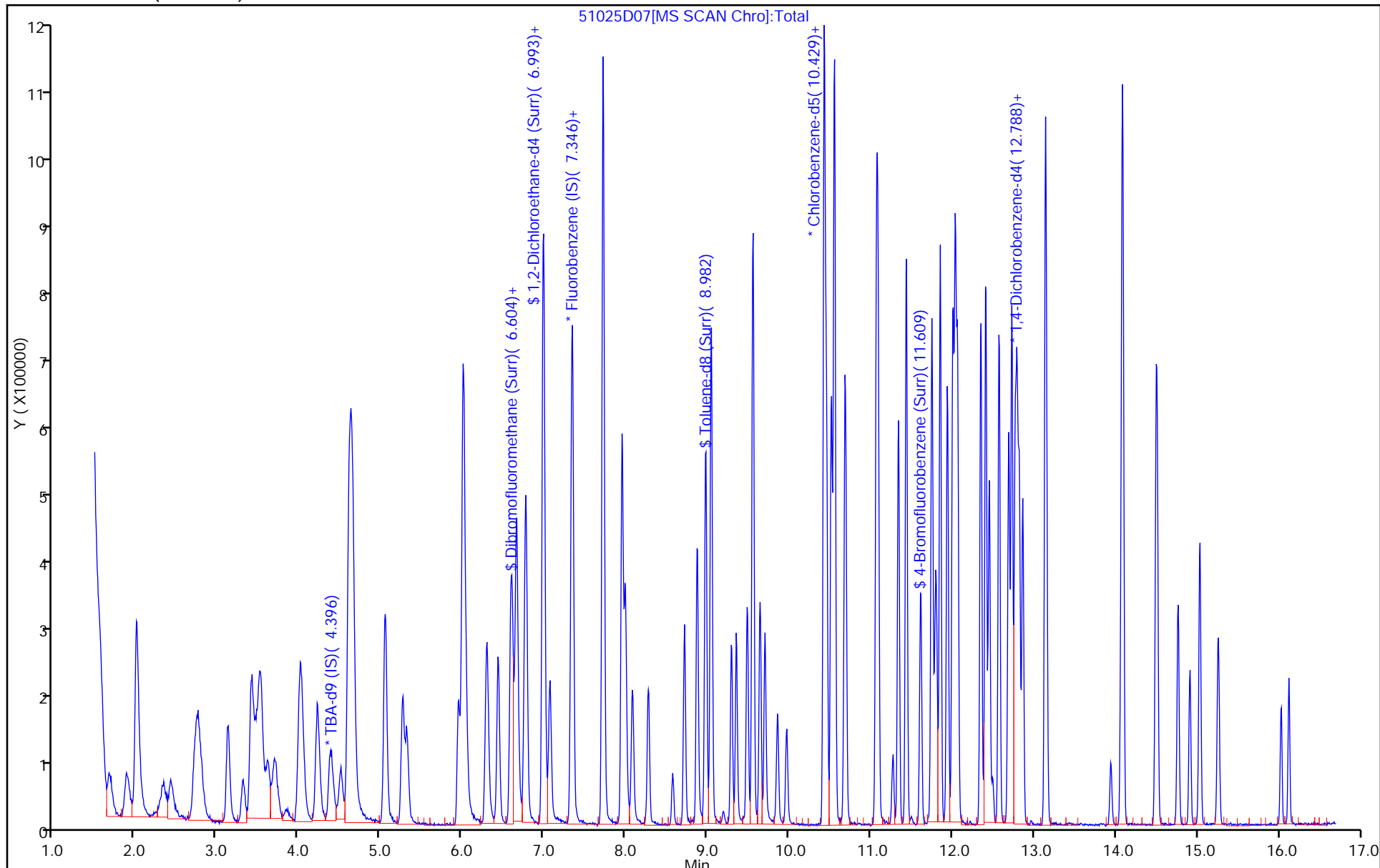
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D07.D  
 Lims ID: 180-71467-C-4 MS  
 Client ID: HD-MW-102S-0/1-0  
 Sample Type: MS  
 Inject. Date: 26-Oct-2017 00:55:30 ALS Bottle#: 7 Worklist Smp#: 7  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-007  
 Misc. Info.: 180-71467-C-4 MS  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:50:55 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 01:16:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	42.3	84.60
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	45.8	91.65
\$ 7 Toluene-d8 (Surr)	50.0	45.1	90.13
\$ 8 4-Bromofluorobenzene (Surr)	50.0	45.5	91.03

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102S-0/1-0 MSD Lab Sample ID: 180-71467-4 MSD  
 Matrix: Water Lab File ID: 51025D08.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:08  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 01:20  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13.0		1.0	0.90
75-01-4	Vinyl chloride	10.9		1.0	0.88
74-83-9	Bromomethane	8.46		1.0	0.89
75-00-3	Chloroethane	10.4		1.0	0.90
75-35-4	1,1-Dichloroethene	14.4		1.0	0.55
67-64-1	Acetone	34.3		5.0	3.4
75-15-0	Carbon disulfide	10.3		1.0	0.88
75-09-2	Methylene Chloride	9.60		1.0	0.36
156-60-5	trans-1,2-Dichloroethene	9.95		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.22		1.0	0.59
75-34-3	1,1-Dichloroethane	11.4		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	15.0		1.0	0.71
74-97-5	Bromochloromethane	9.08		1.0	0.63
78-93-3	2-Butanone (MEK)	18.1		5.0	2.6
67-66-3	Chloroform	9.28		1.0	0.60
71-55-6	1,1,1-Trichloroethane	13.9		1.0	0.60
56-23-5	Carbon tetrachloride	10.5		1.0	0.88
71-43-2	Benzene	9.19		1.0	0.60
107-06-2	1,2-Dichloroethane	10.0		1.0	0.57
79-01-6	Trichloroethene	27.6		1.0	0.69
78-87-5	1,2-Dichloropropane	9.21		1.0	0.66
75-27-4	Bromodichloromethane	8.48		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	8.03		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	21.3		5.0	3.1
108-88-3	Toluene	10.4		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	10.1		1.0	0.58
79-00-5	1,1,2-Trichloroethane	9.79		1.0	0.45
127-18-4	Tetrachloroethene	21.8		1.0	0.47
591-78-6	2-Hexanone	20.1		5.0	3.3
124-48-1	Dibromochloromethane	10.1		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	9.51		1.0	0.50
108-90-7	Chlorobenzene	10.2		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	10.4		1.0	0.57
100-41-4	Ethylbenzene	10.0		1.0	0.51
1330-20-7	Xylenes, Total	20.5		2.0	0.89
100-42-5	Styrene	9.92		1.0	0.47

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-102S-0/1-0 MSD Lab Sample ID: 180-71467-4 MSD  
 Matrix: Water Lab File ID: 51025D08.D  
 Analysis Method: 8260C Date Collected: 10/17/2017 14:08  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/26/2017 01:20  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 227010 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.64		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	9.13		1.0	0.60
107-13-1	Acrylonitrile	102		20	7.8
123-91-1	1,4-Dioxane	171	J	200	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		65-121
2037-26-5	Toluene-d8 (Surr)	107		73-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	95		73-120

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D08.D  
 Lims ID: 180-71467-C-4 MSD  
 Client ID: HD-MW-102S-0/1-0  
 Sample Type: MSD  
 Inject. Date: 26-Oct-2017 01:20:30 ALS Bottle#: 8 Worklist Smp#: 8  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-008  
 Misc. Info.: 180-71467-C-4 MSD  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:50:55 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf

Date: 26-Oct-2017 01:44:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.383	4.384	-0.001	0	190347	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.339	7.340	-0.001	97	520331	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.428	10.429	-0.001	86	111669	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.769	12.770	-0.001	93	161652	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.621	6.610	0.011	93	118507	50.0	47.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.986	6.987	-0.001	0	144299	50.0	47.3	
\$ 7 Toluene-d8 (Surr)	98	8.974	8.982	-0.008	94	475410	50.0	53.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.608	11.609	-0.001	86	164704	50.0	51.3	
11 Dichlorodifluoromethane	85	1.689	1.684	0.005	99	169778	50.0	56.1	
12 Chloromethane	50	1.890	1.891	-0.001	97	197523	50.0	65.0	
14 Butadiene	39	2.011	2.012	-0.001	95	206836	50.0	73.8	
13 Vinyl chloride	62	2.030	2.012	0.018	58	168840	50.0	54.7	
15 Bromomethane	94	2.340	2.335	0.005	89	61706	50.0	42.3	
16 Chloroethane	64	2.437	2.426	0.011	98	88137	50.0	52.0	
17 Dichlorofluoromethane	67	2.753	2.760	-0.007	97	248297	50.0	57.9	
18 Trichlorofluoromethane	101	2.790	2.791	-0.001	73	223247	50.0	58.9	
20 Ethyl ether	59	3.130	3.131	-0.001	95	143398	50.0	58.1	
21 Acrolein	56	3.313	3.314	-0.001	98	105820	150.0	170.3	
22 1,1-Dichloroethene	96	3.428	3.411	0.017	97	183112	50.0	71.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.489	3.496	-0.007	92	146757	50.0	52.5	
24 Acetone	43	3.538	3.539	-0.001	100	233569	100.0	171.7	
25 Iodomethane	142	3.623	3.612	0.011	97	209590	50.0	52.4	
26 Carbon disulfide	76	3.702	3.703	-0.001	99	288947	50.0	51.7	
28 3-Chloro-1-propene	76	4.018	4.001	0.017	90	81845	50.0	49.7	
30 Methyl acetate	43	4.036	4.038	-0.002	99	297048	100.0	110.2	
31 Methylene Chloride	84	4.231	4.226	0.005	99	151875	50.0	48.0	
32 2-Methyl-2-propanol	59	4.517	4.506	0.011	91	123271	500.0	547.6	
33 Acrylonitrile	53	4.608	4.609	-0.001	99	670093	500.0	511.5	
34 trans-1,2-Dichloroethene	96	4.644	4.640	0.004	99	144444	50.0	49.8	
35 Methyl tert-butyl ether	73	4.657	4.664	-0.007	97	358971	50.0	46.1	
36 Hexane	57	5.064	5.053	0.011	94	205565	50.0	55.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.271	5.266	0.005	96	288912	50.0	57.2	
38 Vinyl acetate	43	5.320	5.321	-0.001	97	272694	50.0	53.1	
44 2,2-Dichloropropane	97	6.013	6.008	0.005	50	39297	50.0	61.2	
45 cis-1,2-Dichloroethene	96	6.013	6.008	0.005	82	249519	50.0	75.2	
46 2-Butanone (MEK)	43	6.031	6.026	0.005	98	175395	100.0	90.6	
49 Chlorobromomethane	128	6.293	6.288	0.005	95	67010	50.0	45.4	
51 Tetrahydrofuran	42	6.311	6.306	0.005	91	99399	100.0	88.1	
52 Chloroform	83	6.438	6.434	0.004	94	233756	50.0	46.4	
53 1,1,1-Trichloroethane	97	6.597	6.592	0.005	99	264624	50.0	69.4	
54 Cyclohexane	56	6.663	6.659	0.004	94	272007	50.0	57.8	
56 Carbon tetrachloride	117	6.767	6.762	0.005	95	167036	50.0	52.6	
55 1,1-Dichloropropene	75	6.785	6.780	0.005	92	188646	50.0	45.8	
57 Isobutyl alcohol	41	6.992	6.987	0.005	85	113140	1250.0	1092.8	
58 Benzene	78	6.998	6.993	0.005	97	581504	50.0	46.0	
59 1,2-Dichloroethane	62	7.071	7.072	-0.001	97	184411	50.0	50.0	
62 n-Heptane	43	7.351	7.352	-0.001	94	172875	50.0	58.0	
64 Trichloroethene	130	7.722	7.723	-0.001	96	440033	50.0	138.2	
66 Methylcyclohexane	83	7.953	7.960	-0.007	94	219570	50.0	45.6	
67 1,2-Dichloropropane	63	7.995	7.997	-0.002	93	135593	50.0	46.0	
70 1,4-Dioxane	88	8.080	8.082	-0.002	45	25595	1000.0	854.4	
68 Dibromomethane	93	8.087	8.088	-0.001	96	75789	50.0	43.9	
71 Dichlorobromomethane	83	8.275	8.276	-0.001	99	143662	50.0	42.4	
73 2-Chloroethyl vinyl ether	63	8.573	8.574	-0.001	91	29120	100.0	13.7	
74 cis-1,3-Dichloropropene	75	8.719	8.720	-0.001	93	165280	50.0	40.2	
75 4-Methyl-2-pentanone (MIBK)	43	8.871	8.872	-0.001	99	304548	100.0	106.3	
76 Toluene	91	9.047	9.049	-0.002	98	576410	50.0	51.8	
77 trans-1,3-Dichloropropene	75	9.297	9.298	-0.001	97	153485	50.0	50.7	
78 Ethyl methacrylate	69	9.358	9.353	0.005	92	149345	50.0	40.9	
79 1,1,2-Trichloroethane	97	9.491	9.486	0.005	92	113489	50.0	48.9	
80 Tetrachloroethene	164	9.558	9.559	-0.001	95	231935	50.0	109.2	
81 1,3-Dichloropropane	76	9.649	9.645	0.004	98	195985	50.0	45.7	
82 2-Hexanone	43	9.704	9.705	-0.001	99	221310	100.0	100.7	
84 Chlorodibromomethane	129	9.862	9.857	0.005	91	98623	50.0	50.3	
85 Ethylene Dibromide	107	9.972	9.967	0.005	96	113099	50.0	47.5	
86 3-Chlorobenzotrifluoride	180	10.428	10.435	-0.007	87	207083	50.0	54.0	
87 Chlorobenzene	112	10.458	10.459	-0.001	95	370272	50.0	51.1	
88 4-Chlorobenzotrifluoride	180	10.519	10.520	-0.001	96	198246	50.0	56.0	
89 1,1,1,2-Tetrachloroethane	131	10.549	10.551	-0.002	95	119649	50.0	51.9	
90 Ethylbenzene	106	10.556	10.557	-0.001	98	203132	50.0	50.2	
91 m-Xylene & p-Xylene	106	10.689	10.684	0.005	0	256941	50.0	52.0	
92 o-Xylene	106	11.066	11.068	-0.002	97	238633	50.0	50.6	
93 Styrene	104	11.091	11.092	-0.001	96	395638	50.0	49.6	
94 Bromoform	173	11.273	11.274	-0.001	93	52660	50.0	43.2	
96 2-Chlorobenzotrifluoride	180	11.340	11.341	-0.001	95	198746	50.0	54.1	
97 Isopropylbenzene	105	11.437	11.439	-0.002	96	592452	50.0	51.5	
100 Bromobenzene	156	11.754	11.749	0.005	92	145458	50.0	46.4	
99 1,1,2,2-Tetrachloroethane	83	11.747	11.749	-0.002	82	156719	50.0	45.6	
102 trans-1,4-Dichloro-2-buten	53	11.790	11.785	0.005	81	49651	50.0	52.5	
101 1,2,3-Trichloropropane	110	11.802	11.803	-0.001	85	52101	50.0	40.2	
103 N-Propylbenzene	120	11.851	11.852	-0.001	98	169507	50.0	47.3	
104 2-Chlorotoluene	126	11.942	11.943	-0.001	97	150477	50.0	48.6	
105 3-Chlorotoluene	126	12.009	12.004	0.005	96	168839	50.0	50.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	12.033	12.035	-0.002	94	496557	50.0	48.4	
107 4-Chlorotoluene	126	12.064	12.065	-0.001	96	153654	50.0	45.9	
108 tert-Butylbenzene	119	12.350	12.351	-0.001	94	393568	50.0	45.9	
110 1,2,4-Trimethylbenzene	105	12.410	12.412	-0.002	97	499437	50.0	47.9	
111 1,2-dichloro-4-(trifluorom	214	12.453	12.454	-0.001	96	121248	50.0	46.4	
112 sec-Butylbenzene	105	12.575	12.576	-0.001	94	552128	50.0	46.1	
113 1,3-Dichlorobenzene	146	12.690	12.691	-0.001	98	281105	50.0	50.1	
114 4-Isopropyltoluene	119	12.727	12.728	-0.001	97	482045	50.0	48.4	
115 1,4-Dichlorobenzene	146	12.793	12.795	-0.002	96	280051	50.0	48.7	
116 2,4-Dichloro-1-(trifluorom	214	12.824	12.819	0.005	94	112782	50.0	46.4	
118 2,5-Dichlorobenzotrifluori	214	12.860	12.862	-0.002	0	115965	50.0	44.1	
120 n-Butylbenzene	91	13.140	13.141	-0.001	98	371446	50.0	45.7	
121 1,2-Dichlorobenzene	146	13.152	13.147	0.005	97	267433	50.0	50.1	
122 1,2-Dibromo-3-Chloropropan	75	13.943	13.938	0.005	79	24540	50.0	41.4	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.083	14.084	-0.001	0	555965	150.0	164.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.502	14.504	-0.002	0	381176	100.0	108.8	
126 1,2,4-Trichlorobenzene	180	14.770	14.765	0.005	95	118912	50.0	48.6	
127 Hexachlorobutadiene	225	14.910	14.911	-0.001	95	46165	50.0	51.6	
128 Naphthalene	128	15.031	15.033	-0.002	97	378478	50.0	45.4	
129 1,2,3-Trichlorobenzene	180	15.262	15.258	0.004	96	108055	50.0	48.4	
131 2,4,5-Trichlorotoluene	159	16.023	16.024	-0.001	0	51592	50.0	48.6	
130 2,3,6-Trichlorotoluene	159	16.120	16.121	-0.001	96	54051	50.0	54.7	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	124.9	
S 133 Xylenes, Total	106				0		100.0	102.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	90.8	

### QC Flag Legend

#### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWEEmix1stR_00014	Amount Added: 2.00	Units: uL	
voaWVA1stRest_00021	Amount Added: 2.00	Units: uL	
voaWAcro1stRe_00021	Amount Added: 6.00	Units: uL	
VOA8260VOAPRI_00268	Amount Added: 2.00	Units: uL	
voaW2clev1stR_00023	Amount Added: 2.00	Units: uL	
voaWKet2ndRes_00022	Amount Added: 2.00	Units: uL	
VOA8260INT_00075	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00074	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D08.D

Injection Date: 26-Oct-2017 01:20:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: 180-71467-C-4 MSD

Worklist Smp#: 8

Client ID: HD-MW-102S-0/1-0

Purge Vol: 5.000 mL

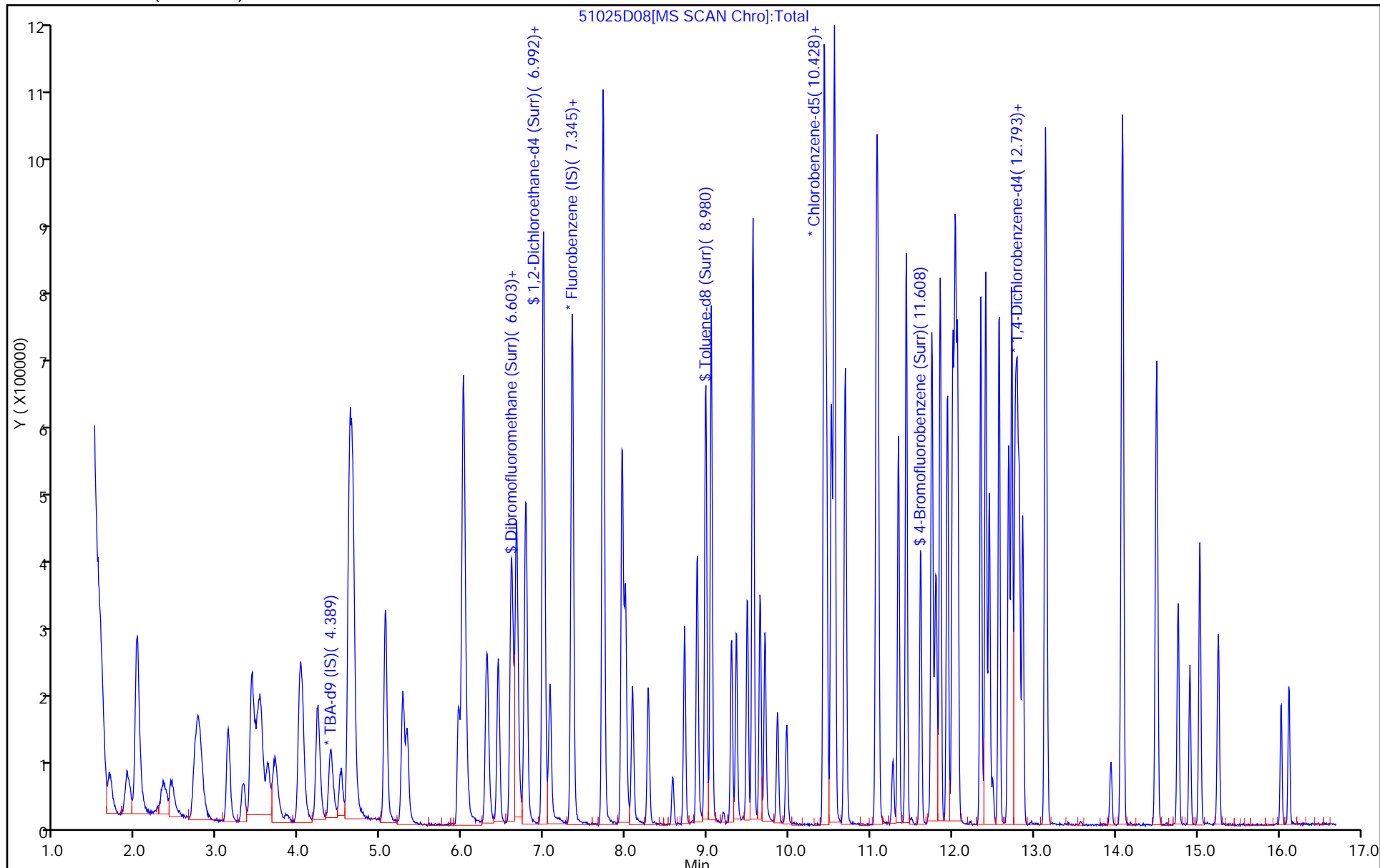
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Recovery Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\51025D08.D  
 Lims ID: 180-71467-C-4 MSD  
 Client ID: HD-MW-102S-0/1-0  
 Sample Type: MSD  
 Inject. Date: 26-Oct-2017 01:20:30 ALS Bottle#: 8 Worklist Smp#: 8  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-0019038-008  
 Misc. Info.: 180-71467-C-4 MSD  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20171025-19038.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 26-Oct-2017 20:50:55 Calib Date: 27-Jul-2017 04:24:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20170726-17756.b\50727D11.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK030

First Level Reviewer: bungardf Date: 26-Oct-2017 01:44:46

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	47.3	94.67
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	47.3	94.51
\$ 7 Toluene-d8 (Surr)	50.0	53.5	106.98
\$ 8 4-Bromofluorobenzene (Surr)	50.0	51.3	102.63



## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 Start Date: 07/27/2017 00:22Analysis Batch Number: 218218 End Date: 07/27/2017 05:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-218218/1		07/27/2017 00:22	1	50727D01.D	DB-624 0.18 (mm)
IC 180-218218/2		07/27/2017 00:51	1	50727D02.D	DB-624 0.18 (mm)
IC 180-218218/3		07/27/2017 01:15	1	50727D03.D	DB-624 0.18 (mm)
ICIS 180-218218/4		07/27/2017 01:39	1	50727D04.D	DB-624 0.18 (mm)
ZZZZZ		07/27/2017 01:39	1		DB-624 0.18 (mm)
IC 180-218218/5		07/27/2017 02:02	1	50727D05.D	DB-624 0.18 (mm)
IC 180-218218/6		07/27/2017 02:26	1	50727D06.D	DB-624 0.18 (mm)
IC 180-218218/8		07/27/2017 03:13	1	50727D08.D	DB-624 0.18 (mm)
IC 180-218218/10		07/27/2017 04:00	1	50727D10.D	DB-624 0.18 (mm)
IC 180-218218/11		07/27/2017 04:24	1	50727D11.D	DB-624 0.18 (mm)
ICV 180-218218/12		07/27/2017 05:03	1		DB-624 0.18 (mm)
ZZZZZ		07/27/2017 05:50	1		DB-624 0.18 (mm)
ZZZZZ		07/27/2017 05:50	1		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 Start Date: 10/24/2017 22:50

Analysis Batch Number: 226849 End Date: 10/25/2017 10:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-226849/1		10/24/2017 22:50	1	51024D01.D	DB-624 0.18 (mm)
CCVIS 180-226849/2		10/24/2017 23:23	1	51024D02.D	DB-624 0.18 (mm)
ZZZZZ		10/24/2017 23:23	1		DB-624 0.18 (mm)
LCS 180-226849/3		10/25/2017 00:03	1	51024D03.D	DB-624 0.18 (mm)
ZZZZZ		10/25/2017 00:38	1		DB-624 0.18 (mm)
MB 180-226849/5		10/25/2017 01:02	1	51024D05.D	DB-624 0.18 (mm)
ZZZZZ		10/25/2017 03:14	1		DB-624 0.18 (mm)
ZZZZZ		10/25/2017 03:39	1		DB-624 0.18 (mm)
ZZZZZ		10/25/2017 05:14	1		DB-624 0.18 (mm)
ZZZZZ		10/25/2017 05:38	1		DB-624 0.18 (mm)
ZZZZZ		10/25/2017 06:26	1		DB-624 0.18 (mm)
ZZZZZ		10/25/2017 06:50	1		DB-624 0.18 (mm)
ZZZZZ		10/25/2017 07:15	1		DB-624 0.18 (mm)
180-71467-2		10/25/2017 08:03	5	51024D22.D	DB-624 0.18 (mm)
180-71467-5		10/25/2017 09:15	1	51024D25.D	DB-624 0.18 (mm)
180-71467-6		10/25/2017 09:39	1	51024D26.D	DB-624 0.18 (mm)
180-71467-7		10/25/2017 10:03	1	51024D27.D	DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-71467-1

SDG No.: \_\_\_\_\_

Instrument ID: CHHP5 Start Date: 10/25/2017 21:39

Analysis Batch Number: 227010 End Date: 10/26/2017 08:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-227010/1		10/25/2017 21:39	1	51025D01.D	DB-624 0.18 (mm)
CCVIS 180-227010/2		10/25/2017 22:12	1	51025D02.D	DB-624 0.18 (mm)
ZZZZZ		10/25/2017 22:12	1		DB-624 0.18 (mm)
LCS 180-227010/3		10/25/2017 22:51	1	51025D03.D	DB-624 0.18 (mm)
ZZZZZ		10/25/2017 23:27	1		DB-624 0.18 (mm)
MB 180-227010/5		10/25/2017 23:51	1	51025D05.D	DB-624 0.18 (mm)
180-71467-4		10/26/2017 00:27	1	51025D06.D	DB-624 0.18 (mm)
180-71467-4 MS		10/26/2017 00:55	1	51025D07.D	DB-624 0.18 (mm)
180-71467-4 MSD		10/26/2017 01:20	1	51025D08.D	DB-624 0.18 (mm)
180-71467-1		10/26/2017 02:08	1	51025D10.D	DB-624 0.18 (mm)
180-71467-3		10/26/2017 02:31	1	51025D11.D	DB-624 0.18 (mm)
180-71467-8		10/26/2017 02:55	1	51025D12.D	DB-624 0.18 (mm)
180-71467-9		10/26/2017 03:19	1	51025D13.D	DB-624 0.18 (mm)
180-71467-10		10/26/2017 03:43	1	51025D14.D	DB-624 0.18 (mm)
ZZZZZ		10/26/2017 04:07	10		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 04:56	1		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 05:20	1		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 05:44	1		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 06:08	1		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 06:32	1		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 06:56	1		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 07:43	10		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 08:07	10		DB-624 0.18 (mm)
ZZZZZ		10/26/2017 08:31	25		DB-624 0.18 (mm)

# Shipping and Receiving Documents

# Chain of Custody Record

450-KOF

TestAmerica Laboratories

<b>Client Contact</b> Groundwater Sciences Corporation 2601 Market Place St. Suite 310 Harrisburg, PA 17110 (717) 901-8180 Phone (717) 657-1611 FAX	<b>Project Manager:</b> Christopher D. O'neil <b>Tel/Fax:</b> 717-901-8176 / (717) 657-1611	<b>Site Contact:</b> Kaitlin B. Franssen <b>Lab Contact:</b> Carrie Gamber	<b>Date Submitted:</b> 10/17/17 <b>Carrier:</b> FEDEX	<b>COC No:</b> TAP2017-101704 <b>Job No.:</b> 10012:32.0002 <b>Container No.:</b> <b>SDG No.:</b>
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### Sample Identification

Sample ID	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Analysis Turnaround Time	Calendar (C) or Work Days (W)	Analysis Method	Test Results	Notes
HD-MW-1030-0/1-0	10/16/17	1410	GW	W	3	2 weeks		Standard		
HD-MW-1030-0/1-0	10/16/17	1157			3	1 week				
HD-MW-1020-0/1-0	10/17/17	145			3	5 days				
HD-MW-1020-0/1-0	10/17/17	1403			3	1 day				
HD-MW-1020-0/1-QMS	10/17/17	1408			3					
HD-MW-1020-0/1-QMS	10/17/17	1408			3					
HD-RW-2-0/1-0	10/17/17	1300			3					
HD-MW-57-0/1-0	10/17/17	1415	↓		3					
HD-QC1-0/1-2	10/17/17	1200	TB		2					
HD-QC1-0/1-1	10/17/17	0800	GW		3					
HD-QC1-0/1-3	10/17/17	1310	EQ RWS		3					
HD-QC1-0/1-4	10/17/17	1300	Field Blank	↓	3					



180-71467 Chain of Custody

Preservation Used:	1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Unpreserved, 7= Zinc Acetate & NaOH	Field Filter	Number of Containers
			3 1 1 2 1 1
			2 1 1 4 5 1
			N Y N N N N

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client  Disposal By Lab  Months

<b>Relinquished by:</b> [Signature]	<b>Relinquished by:</b> [Signature]	<b>Relinquished by:</b> [Signature]	<b>Relinquished by:</b> [Signature]
<b>Company:</b> WSE	<b>Company:</b> TA	<b>Company:</b> GSC	<b>Company:</b> [Signature]
<b>Date/Time:</b> 10/17/17 1450	<b>Date/Time:</b> 10/17/17 1622	<b>Date/Time:</b> 10/17/17 1450	<b>Date/Time:</b> 10-18-17 9:10

Special Instructions: QC Requirements & Comments: CLP Like Deliverables

ORIGIN ID: KPDA (610) 337-9992  
SAMPLE RECEIPT  
TEST AMERICA  
1010 WEST 9TH AVE  
SUITE 50  
KING OF PRUSSIA, PA 19406  
UNITED STATES US

SHIP DATE: 17OCT17  
ACTWGT: 35.00 LB  
CAD: 8490299/INET3920

BILL RECIPIENT

TO **SAMPLE RECEIPT**  
**TEST AMERICA - PITTSBURGH**  
**301 ALPHA DR**

54914/94FC/104C

**PITTSBURGH PA 15238**

(412) 963-7058

REF:



FedEx  
Express



3172117091301uv

TRK# 7705 2123 0727  
0201

WED - 18 OCT 3:00P  
STANDARD OVERNIGHT

**E8 AGCA**

**15238**  
PA-US **PIT**

Uncorrected temp  
Thermometer, ID

1.2 °C / 1.1

CF 0 Initials TS

PT-WI-SR-001 effective 7/26/13

# Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-71467-1

**Login Number: 71467**  
**List Number: 1**  
**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

<b>Question</b>	<b>Answer</b>	<b>Comment</b>
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
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.	True	
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.	True	
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	