

## ANALYTICAL REPORT

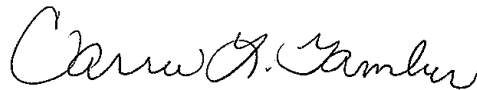
Job Number: 180-48019-1

Job Description: Harley Davidson

For:

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

Attention: Allan Miller



Approved for release.  
Carrie L. Gamber  
Senior Project Manager  
10/6/2015 10:03 AM

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10/06/2015

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# Definitions/Glossary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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## Qualifiers

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### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^c	CCV Recovery is outside acceptance limits.
E	Result exceeded calibration range.

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## Glossary

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

## CASE NARRATIVE

**Client: Groundwater Sciences Corporation**

**Project: Harley Davidson**

**Report Number: 180-48019-1**

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 09/23/2015; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.6° C and 4.9° C.

### **VOALTILES**

The following sample was diluted to bring the concentration of target analytes within the calibration range: HD-MW-49D-0/1-0 (180-48019-2) HD-MW-12-0/1-0 (180-48019-3). . Elevated reporting limits (RLs) are provided.

The following analytes were outside the %D limits but within the method criteria for number of allowed targets outside QC limits: 2-Hexanone, 4-Methyl-2-pentanone, and cis-1,3-Dichloropropene for sample (CCVIS 180-155577/2)

The following analytes were outside the %D criteria but within the method criteria of 20% allowed out: 2-Butanone, 2-Hexanone, 4-Methyl-2-pentanone for sample (CCVIS 180-155398/2).

### **HEXAVALENT CHROMIUM**

Sample HD-MW-47-0/1-0 (180-48019-1) required dilution prior to analysis. The reporting limits have been adjusted accordingly.

# Detection Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

## Client Sample ID: HD-MW-47-0/1-0

## Lab Sample ID: 180-48019-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.50	J	1.0	0.30	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	5.8		1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	4.5		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	3.6		1.0	0.15	ug/L	1		8260C	Total/NA
Cr (VI)	3.8		0.25	0.048	mg/L	25		7196A	Total/NA
Cr (VI)	3.9		0.25	0.048	mg/L	25		7196A	Dissolved

## Client Sample ID: HD-MW-49D-0/1-0

## Lab Sample ID: 180-48019-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	190	J	200	59	ug/L	200		8260C	Total/NA
1,1-Dichloroethane	520		200	23	ug/L	200		8260C	Total/NA
cis-1,2-Dichloroethene	3400		200	47	ug/L	200		8260C	Total/NA
1,1,1-Trichloroethane	1900		200	57	ug/L	200		8260C	Total/NA
Trichloroethene	3300		200	29	ug/L	200		8260C	Total/NA
Tetrachloroethene	480		200	30	ug/L	200		8260C	Total/NA

## Client Sample ID: HD-MW-12-0/1-0

## Lab Sample ID: 180-48019-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	59	E	1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	120	E	1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	6.4		1.0	0.15	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene - DL	52		10	2.4	ug/L	10		8260C	Total/NA
Trichloroethene - DL	120		10	1.4	ug/L	10		8260C	Total/NA
Tetrachloroethene - DL	5.8	J	10	1.5	ug/L	10		8260C	Total/NA

## Client Sample ID: HD-MW-9-0/1-0

## Lab Sample ID: 180-48019-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	5.0		1.0	0.23	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	36		1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	29		1.0	0.14	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-QC6-0/1-2

## Lab Sample ID: 180-48019-5

No Detections.

## Client Sample ID: HD-QC2-0/1-3

## Lab Sample ID: 180-48019-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	12		5.0	2.5	ug/L	1		8260C	Total/NA
2-Butanone (MEK)	2.5	J ^c	5.0	0.55	ug/L	1		8260C	Total/NA

## Client Sample ID: HD-QC2-0/1-4

## Lab Sample ID: 180-48019-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	12		5.0	2.5	ug/L	1		8260C	Total/NA
2-Butanone (MEK)	2.1	J ^c	5.0	0.55	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: 180-48019-1

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

**Client Sample ID: HD-MW-47-0/1-0**

**Date Collected: 09/22/15 10:22**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			09/30/15 16:15	1
Vinyl chloride	ND		1.0	0.23	ug/L			09/30/15 16:15	1
Bromomethane	ND		1.0	0.31	ug/L			09/30/15 16:15	1
Chloroethane	ND		1.0	0.21	ug/L			09/30/15 16:15	1
<b>1,1-Dichloroethene</b>	<b>0.50</b>	<b>J</b>	1.0	0.30	ug/L			09/30/15 16:15	1
Acetone	ND		5.0	2.5	ug/L			09/30/15 16:15	1
Carbon disulfide	ND		1.0	0.21	ug/L			09/30/15 16:15	1
Methylene Chloride	ND		1.0	0.13	ug/L			09/30/15 16:15	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			09/30/15 16:15	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			09/30/15 16:15	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			09/30/15 16:15	1
<b>cis-1,2-Dichloroethene</b>	<b>5.8</b>		1.0	0.24	ug/L			09/30/15 16:15	1
Bromochloromethane	ND		1.0	0.18	ug/L			09/30/15 16:15	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			09/30/15 16:15	1
Chloroform	ND		1.0	0.17	ug/L			09/30/15 16:15	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/30/15 16:15	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			09/30/15 16:15	1
Benzene	ND		1.0	0.11	ug/L			09/30/15 16:15	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/30/15 16:15	1
<b>Trichloroethene</b>	<b>4.5</b>		1.0	0.14	ug/L			09/30/15 16:15	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			09/30/15 16:15	1
Bromodichloromethane	ND		1.0	0.13	ug/L			09/30/15 16:15	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			09/30/15 16:15	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53	ug/L			09/30/15 16:15	1
Toluene	ND		1.0	0.15	ug/L			09/30/15 16:15	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			09/30/15 16:15	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			09/30/15 16:15	1
<b>Tetrachloroethene</b>	<b>3.6</b>		1.0	0.15	ug/L			09/30/15 16:15	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			09/30/15 16:15	1
Dibromochloromethane	ND		1.0	0.14	ug/L			09/30/15 16:15	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			09/30/15 16:15	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/30/15 16:15	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			09/30/15 16:15	1
Ethylbenzene	ND		1.0	0.23	ug/L			09/30/15 16:15	1
Xylenes, Total	ND		3.0	0.49	ug/L			09/30/15 16:15	1
Styrene	ND		1.0	0.097	ug/L			09/30/15 16:15	1
Bromoform	ND		1.0	0.19	ug/L			09/30/15 16:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			09/30/15 16:15	1
Acrylonitrile	ND		20	0.55	ug/L			09/30/15 16:15	1
1,4-Dioxane	ND		200	34	ug/L			09/30/15 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		64 - 135		09/30/15 16:15	1
Toluene-d8 (Surr)	94		71 - 118		09/30/15 16:15	1
4-Bromofluorobenzene (Surr)	90		70 - 118		09/30/15 16:15	1
Dibromofluoromethane (Surr)	104		70 - 128		09/30/15 16:15	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Client Sample ID: HD-MW-49D-0/1-0**  
**Date Collected: 09/22/15 12:57**  
**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		200	57	ug/L			09/30/15 17:03	200
Vinyl chloride	ND		200	45	ug/L			09/30/15 17:03	200
Bromomethane	ND		200	63	ug/L			09/30/15 17:03	200
Chloroethane	ND		200	43	ug/L			09/30/15 17:03	200
<b>1,1-Dichloroethene</b>	<b>190</b>	<b>J</b>	200	59	ug/L			09/30/15 17:03	200
Acetone	ND		1000	500	ug/L			09/30/15 17:03	200
Carbon disulfide	ND		200	42	ug/L			09/30/15 17:03	200
Methylene Chloride	ND		200	25	ug/L			09/30/15 17:03	200
trans-1,2-Dichloroethene	ND		200	34	ug/L			09/30/15 17:03	200
Methyl tert-butyl ether	ND		200	37	ug/L			09/30/15 17:03	200
<b>1,1-Dichloroethane</b>	<b>520</b>		200	23	ug/L			09/30/15 17:03	200
<b>cis-1,2-Dichloroethene</b>	<b>3400</b>		200	47	ug/L			09/30/15 17:03	200
Bromochloromethane	ND		200	36	ug/L			09/30/15 17:03	200
2-Butanone (MEK)	ND	<sup>^c</sup>	1000	110	ug/L			09/30/15 17:03	200
Chloroform	ND		200	34	ug/L			09/30/15 17:03	200
<b>1,1,1-Trichloroethane</b>	<b>1900</b>		200	57	ug/L			09/30/15 17:03	200
Carbon tetrachloride	ND		200	27	ug/L			09/30/15 17:03	200
Benzene	ND		200	21	ug/L			09/30/15 17:03	200
1,2-Dichloroethane	ND		200	42	ug/L			09/30/15 17:03	200
<b>Trichloroethene</b>	<b>3300</b>		200	29	ug/L			09/30/15 17:03	200
1,2-Dichloropropane	ND		200	19	ug/L			09/30/15 17:03	200
Bromodichloromethane	ND		200	26	ug/L			09/30/15 17:03	200
cis-1,3-Dichloropropene	ND		200	37	ug/L			09/30/15 17:03	200
4-Methyl-2-pentanone (MIBK)	ND	<sup>^c</sup>	1000	110	ug/L			09/30/15 17:03	200
Toluene	ND		200	30	ug/L			09/30/15 17:03	200
trans-1,3-Dichloropropene	ND		200	30	ug/L			09/30/15 17:03	200
1,1,2-Trichloroethane	ND		200	40	ug/L			09/30/15 17:03	200
<b>Tetrachloroethene</b>	<b>480</b>		200	30	ug/L			09/30/15 17:03	200
2-Hexanone	ND	<sup>^c</sup>	1000	32	ug/L			09/30/15 17:03	200
Dibromochloromethane	ND		200	27	ug/L			09/30/15 17:03	200
1,2-Dibromoethane (EDB)	ND		200	36	ug/L			09/30/15 17:03	200
Chlorobenzene	ND		200	27	ug/L			09/30/15 17:03	200
1,1,1,2-Tetrachloroethane	ND		200	55	ug/L			09/30/15 17:03	200
Ethylbenzene	ND		200	45	ug/L			09/30/15 17:03	200
Xylenes, Total	ND		600	98	ug/L			09/30/15 17:03	200
Styrene	ND		200	19	ug/L			09/30/15 17:03	200
Bromoform	ND		200	38	ug/L			09/30/15 17:03	200
1,1,1,2-Tetrachloroethane	ND		200	40	ug/L			09/30/15 17:03	200
Acrylonitrile	ND		4000	110	ug/L			09/30/15 17:03	200
1,4-Dioxane	ND		40000	6900	ug/L			09/30/15 17:03	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 135		09/30/15 17:03	200
Toluene-d8 (Surr)	93		71 - 118		09/30/15 17:03	200
4-Bromofluorobenzene (Surr)	87		70 - 118		09/30/15 17:03	200
Dibromofluoromethane (Surr)	106		70 - 128		09/30/15 17:03	200



# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Client Sample ID: HD-MW-12-0/1-0**

**Date Collected: 09/22/15 14:00**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			09/30/15 17:27	1
Vinyl chloride	ND		1.0	0.23	ug/L			09/30/15 17:27	1
Bromomethane	ND		1.0	0.31	ug/L			09/30/15 17:27	1
Chloroethane	ND		1.0	0.21	ug/L			09/30/15 17:27	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			09/30/15 17:27	1
Acetone	ND		5.0	2.5	ug/L			09/30/15 17:27	1
Carbon disulfide	ND		1.0	0.21	ug/L			09/30/15 17:27	1
Methylene Chloride	ND		1.0	0.13	ug/L			09/30/15 17:27	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			09/30/15 17:27	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			09/30/15 17:27	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			09/30/15 17:27	1
<b>cis-1,2-Dichloroethene</b>	<b>59</b>	<b>E</b>	1.0	0.24	ug/L			09/30/15 17:27	1
Bromochloromethane	ND		1.0	0.18	ug/L			09/30/15 17:27	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			09/30/15 17:27	1
Chloroform	ND		1.0	0.17	ug/L			09/30/15 17:27	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/30/15 17:27	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			09/30/15 17:27	1
Benzene	ND		1.0	0.11	ug/L			09/30/15 17:27	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/30/15 17:27	1
<b>Trichloroethene</b>	<b>120</b>	<b>E</b>	1.0	0.14	ug/L			09/30/15 17:27	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			09/30/15 17:27	1
Bromodichloromethane	ND		1.0	0.13	ug/L			09/30/15 17:27	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			09/30/15 17:27	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53	ug/L			09/30/15 17:27	1
Toluene	ND		1.0	0.15	ug/L			09/30/15 17:27	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			09/30/15 17:27	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			09/30/15 17:27	1
<b>Tetrachloroethene</b>	<b>6.4</b>		1.0	0.15	ug/L			09/30/15 17:27	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			09/30/15 17:27	1
Dibromochloromethane	ND		1.0	0.14	ug/L			09/30/15 17:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			09/30/15 17:27	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/30/15 17:27	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			09/30/15 17:27	1
Ethylbenzene	ND		1.0	0.23	ug/L			09/30/15 17:27	1
Xylenes, Total	ND		3.0	0.49	ug/L			09/30/15 17:27	1
Styrene	ND		1.0	0.097	ug/L			09/30/15 17:27	1
Bromoform	ND		1.0	0.19	ug/L			09/30/15 17:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			09/30/15 17:27	1
Acrylonitrile	ND		20	0.55	ug/L			09/30/15 17:27	1
1,4-Dioxane	ND		200	34	ug/L			09/30/15 17:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		64 - 135		09/30/15 17:27	1
Toluene-d8 (Surr)	97		71 - 118		09/30/15 17:27	1
4-Bromofluorobenzene (Surr)	90		70 - 118		09/30/15 17:27	1
Dibromofluoromethane (Surr)	106		70 - 128		09/30/15 17:27	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Client Sample ID: HD-MW-9-0/1-0**

**Date Collected: 09/22/15 12:40**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			10/01/15 18:36	1
<b>Vinyl chloride</b>	<b>5.0</b>		1.0	0.23	ug/L			10/01/15 18:36	1
Bromomethane	ND		1.0	0.31	ug/L			10/01/15 18:36	1
Chloroethane	ND		1.0	0.21	ug/L			10/01/15 18:36	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			10/01/15 18:36	1
Acetone	ND		5.0	2.5	ug/L			10/01/15 18:36	1
Carbon disulfide	ND		1.0	0.21	ug/L			10/01/15 18:36	1
Methylene Chloride	ND		1.0	0.13	ug/L			10/01/15 18:36	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			10/01/15 18:36	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			10/01/15 18:36	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			10/01/15 18:36	1
<b>cis-1,2-Dichloroethene</b>	<b>36</b>		1.0	0.24	ug/L			10/01/15 18:36	1
Bromochloromethane	ND		1.0	0.18	ug/L			10/01/15 18:36	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			10/01/15 18:36	1
Chloroform	ND		1.0	0.17	ug/L			10/01/15 18:36	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			10/01/15 18:36	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			10/01/15 18:36	1
Benzene	ND		1.0	0.11	ug/L			10/01/15 18:36	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/01/15 18:36	1
<b>Trichloroethene</b>	<b>29</b>		1.0	0.14	ug/L			10/01/15 18:36	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			10/01/15 18:36	1
Bromodichloromethane	ND		1.0	0.13	ug/L			10/01/15 18:36	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.19	ug/L			10/01/15 18:36	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53	ug/L			10/01/15 18:36	1
Toluene	ND		1.0	0.15	ug/L			10/01/15 18:36	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			10/01/15 18:36	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			10/01/15 18:36	1
Tetrachloroethene	ND		1.0	0.15	ug/L			10/01/15 18:36	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			10/01/15 18:36	1
Dibromochloromethane	ND		1.0	0.14	ug/L			10/01/15 18:36	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			10/01/15 18:36	1
Chlorobenzene	ND		1.0	0.14	ug/L			10/01/15 18:36	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			10/01/15 18:36	1
Ethylbenzene	ND		1.0	0.23	ug/L			10/01/15 18:36	1
Xylenes, Total	ND		3.0	0.49	ug/L			10/01/15 18:36	1
Styrene	ND		1.0	0.097	ug/L			10/01/15 18:36	1
Bromoform	ND		1.0	0.19	ug/L			10/01/15 18:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			10/01/15 18:36	1
Acrylonitrile	ND		20	0.55	ug/L			10/01/15 18:36	1
1,4-Dioxane	ND		200	34	ug/L			10/01/15 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 135		10/01/15 18:36	1
Toluene-d8 (Surr)	95		71 - 118		10/01/15 18:36	1
4-Bromofluorobenzene (Surr)	87		70 - 118		10/01/15 18:36	1
Dibromofluoromethane (Surr)	108		70 - 128		10/01/15 18:36	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Client Sample ID: HD-QC6-0/1-2**

**Date Collected: 09/22/15 12:00**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-5**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			09/30/15 16:39	1
Vinyl chloride	ND		1.0	0.23	ug/L			09/30/15 16:39	1
Bromomethane	ND		1.0	0.31	ug/L			09/30/15 16:39	1
Chloroethane	ND		1.0	0.21	ug/L			09/30/15 16:39	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			09/30/15 16:39	1
Acetone	ND		5.0	2.5	ug/L			09/30/15 16:39	1
Carbon disulfide	ND		1.0	0.21	ug/L			09/30/15 16:39	1
Methylene Chloride	ND		1.0	0.13	ug/L			09/30/15 16:39	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			09/30/15 16:39	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			09/30/15 16:39	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			09/30/15 16:39	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			09/30/15 16:39	1
Bromochloromethane	ND		1.0	0.18	ug/L			09/30/15 16:39	1
2-Butanone (MEK)	ND	^c	5.0	0.55	ug/L			09/30/15 16:39	1
Chloroform	ND		1.0	0.17	ug/L			09/30/15 16:39	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/30/15 16:39	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			09/30/15 16:39	1
Benzene	ND		1.0	0.11	ug/L			09/30/15 16:39	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/30/15 16:39	1
Trichloroethene	ND		1.0	0.14	ug/L			09/30/15 16:39	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			09/30/15 16:39	1
Bromodichloromethane	ND		1.0	0.13	ug/L			09/30/15 16:39	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			09/30/15 16:39	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53	ug/L			09/30/15 16:39	1
Toluene	ND		1.0	0.15	ug/L			09/30/15 16:39	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			09/30/15 16:39	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			09/30/15 16:39	1
Tetrachloroethene	ND		1.0	0.15	ug/L			09/30/15 16:39	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			09/30/15 16:39	1
Dibromochloromethane	ND		1.0	0.14	ug/L			09/30/15 16:39	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			09/30/15 16:39	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/30/15 16:39	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			09/30/15 16:39	1
Ethylbenzene	ND		1.0	0.23	ug/L			09/30/15 16:39	1
Xylenes, Total	ND		3.0	0.49	ug/L			09/30/15 16:39	1
Styrene	ND		1.0	0.097	ug/L			09/30/15 16:39	1
Bromoform	ND		1.0	0.19	ug/L			09/30/15 16:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			09/30/15 16:39	1
Acrylonitrile	ND		20	0.55	ug/L			09/30/15 16:39	1
1,4-Dioxane	ND		200	34	ug/L			09/30/15 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 135		09/30/15 16:39	1
Toluene-d8 (Surr)	97		71 - 118		09/30/15 16:39	1
4-Bromofluorobenzene (Surr)	91		70 - 118		09/30/15 16:39	1
Dibromofluoromethane (Surr)	109		70 - 128		09/30/15 16:39	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Client Sample ID: HD-QC2-0/1-3**

**Date Collected: 09/22/15 15:00**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-6**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			09/30/15 19:28	1
Vinyl chloride	ND		1.0	0.23	ug/L			09/30/15 19:28	1
Bromomethane	ND		1.0	0.31	ug/L			09/30/15 19:28	1
Chloroethane	ND		1.0	0.21	ug/L			09/30/15 19:28	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			09/30/15 19:28	1
<b>Acetone</b>	<b>12</b>		5.0	2.5	ug/L			09/30/15 19:28	1
Carbon disulfide	ND		1.0	0.21	ug/L			09/30/15 19:28	1
Methylene Chloride	ND		1.0	0.13	ug/L			09/30/15 19:28	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			09/30/15 19:28	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			09/30/15 19:28	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			09/30/15 19:28	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			09/30/15 19:28	1
Bromochloromethane	ND		1.0	0.18	ug/L			09/30/15 19:28	1
<b>2-Butanone (MEK)</b>	<b>2.5</b>	<b>J ^c</b>	5.0	0.55	ug/L			09/30/15 19:28	1
Chloroform	ND		1.0	0.17	ug/L			09/30/15 19:28	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/30/15 19:28	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			09/30/15 19:28	1
Benzene	ND		1.0	0.11	ug/L			09/30/15 19:28	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/30/15 19:28	1
Trichloroethene	ND		1.0	0.14	ug/L			09/30/15 19:28	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			09/30/15 19:28	1
Bromodichloromethane	ND		1.0	0.13	ug/L			09/30/15 19:28	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			09/30/15 19:28	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53	ug/L			09/30/15 19:28	1
Toluene	ND		1.0	0.15	ug/L			09/30/15 19:28	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			09/30/15 19:28	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			09/30/15 19:28	1
Tetrachloroethene	ND		1.0	0.15	ug/L			09/30/15 19:28	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			09/30/15 19:28	1
Dibromochloromethane	ND		1.0	0.14	ug/L			09/30/15 19:28	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			09/30/15 19:28	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/30/15 19:28	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			09/30/15 19:28	1
Ethylbenzene	ND		1.0	0.23	ug/L			09/30/15 19:28	1
Xylenes, Total	ND		3.0	0.49	ug/L			09/30/15 19:28	1
Styrene	ND		1.0	0.097	ug/L			09/30/15 19:28	1
Bromoform	ND		1.0	0.19	ug/L			09/30/15 19:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			09/30/15 19:28	1
Acrylonitrile	ND		20	0.55	ug/L			09/30/15 19:28	1
1,4-Dioxane	ND		200	34	ug/L			09/30/15 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 135		09/30/15 19:28	1
Toluene-d8 (Surr)	93		71 - 118		09/30/15 19:28	1
4-Bromofluorobenzene (Surr)	89		70 - 118		09/30/15 19:28	1
Dibromofluoromethane (Surr)	109		70 - 128		09/30/15 19:28	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Client Sample ID: HD-QC2-0/1-4**

**Date Collected: 09/22/15 15:05**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-7**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			09/30/15 19:04	1
Vinyl chloride	ND		1.0	0.23	ug/L			09/30/15 19:04	1
Bromomethane	ND		1.0	0.31	ug/L			09/30/15 19:04	1
Chloroethane	ND		1.0	0.21	ug/L			09/30/15 19:04	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			09/30/15 19:04	1
<b>Acetone</b>	<b>12</b>		5.0	2.5	ug/L			09/30/15 19:04	1
Carbon disulfide	ND		1.0	0.21	ug/L			09/30/15 19:04	1
Methylene Chloride	ND		1.0	0.13	ug/L			09/30/15 19:04	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			09/30/15 19:04	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			09/30/15 19:04	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			09/30/15 19:04	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			09/30/15 19:04	1
Bromochloromethane	ND		1.0	0.18	ug/L			09/30/15 19:04	1
<b>2-Butanone (MEK)</b>	<b>2.1</b>	<b>J ^c</b>	5.0	0.55	ug/L			09/30/15 19:04	1
Chloroform	ND		1.0	0.17	ug/L			09/30/15 19:04	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/30/15 19:04	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			09/30/15 19:04	1
Benzene	ND		1.0	0.11	ug/L			09/30/15 19:04	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/30/15 19:04	1
Trichloroethene	ND		1.0	0.14	ug/L			09/30/15 19:04	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			09/30/15 19:04	1
Bromodichloromethane	ND		1.0	0.13	ug/L			09/30/15 19:04	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			09/30/15 19:04	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53	ug/L			09/30/15 19:04	1
Toluene	ND		1.0	0.15	ug/L			09/30/15 19:04	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			09/30/15 19:04	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			09/30/15 19:04	1
Tetrachloroethene	ND		1.0	0.15	ug/L			09/30/15 19:04	1
2-Hexanone	ND	^c	5.0	0.16	ug/L			09/30/15 19:04	1
Dibromochloromethane	ND		1.0	0.14	ug/L			09/30/15 19:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			09/30/15 19:04	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/30/15 19:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			09/30/15 19:04	1
Ethylbenzene	ND		1.0	0.23	ug/L			09/30/15 19:04	1
Xylenes, Total	ND		3.0	0.49	ug/L			09/30/15 19:04	1
Styrene	ND		1.0	0.097	ug/L			09/30/15 19:04	1
Bromoform	ND		1.0	0.19	ug/L			09/30/15 19:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			09/30/15 19:04	1
Acrylonitrile	ND		20	0.55	ug/L			09/30/15 19:04	1
1,4-Dioxane	ND		200	34	ug/L			09/30/15 19:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		64 - 135		09/30/15 19:04	1
Toluene-d8 (Surr)	93		71 - 118		09/30/15 19:04	1
4-Bromofluorobenzene (Surr)	89		70 - 118		09/30/15 19:04	1
Dibromofluoromethane (Surr)	106		70 - 128		09/30/15 19:04	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Client Sample ID: HD-MW-12-0/1-0**

**Date Collected: 09/22/15 14:00**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		10	2.8	ug/L			10/01/15 18:12	10
Vinyl chloride	ND		10	2.3	ug/L			10/01/15 18:12	10
Bromomethane	ND		10	3.1	ug/L			10/01/15 18:12	10
Chloroethane	ND		10	2.1	ug/L			10/01/15 18:12	10
1,1-Dichloroethene	ND		10	3.0	ug/L			10/01/15 18:12	10
Acetone	ND		50	25	ug/L			10/01/15 18:12	10
Carbon disulfide	ND		10	2.1	ug/L			10/01/15 18:12	10
Methylene Chloride	ND		10	1.3	ug/L			10/01/15 18:12	10
trans-1,2-Dichloroethene	ND		10	1.7	ug/L			10/01/15 18:12	10
Methyl tert-butyl ether	ND		10	1.8	ug/L			10/01/15 18:12	10
1,1-Dichloroethane	ND		10	1.2	ug/L			10/01/15 18:12	10
<b>cis-1,2-Dichloroethene</b>	<b>52</b>		10	2.4	ug/L			10/01/15 18:12	10
Bromochloromethane	ND		10	1.8	ug/L			10/01/15 18:12	10
2-Butanone (MEK)	ND		50	5.5	ug/L			10/01/15 18:12	10
Chloroform	ND		10	1.7	ug/L			10/01/15 18:12	10
1,1,1-Trichloroethane	ND		10	2.9	ug/L			10/01/15 18:12	10
Carbon tetrachloride	ND		10	1.4	ug/L			10/01/15 18:12	10
Benzene	ND		10	1.1	ug/L			10/01/15 18:12	10
1,2-Dichloroethane	ND		10	2.1	ug/L			10/01/15 18:12	10
<b>Trichloroethene</b>	<b>120</b>		10	1.4	ug/L			10/01/15 18:12	10
1,2-Dichloropropane	ND		10	0.95	ug/L			10/01/15 18:12	10
Bromodichloromethane	ND		10	1.3	ug/L			10/01/15 18:12	10
cis-1,3-Dichloropropene	ND	^c	10	1.9	ug/L			10/01/15 18:12	10
4-Methyl-2-pentanone (MIBK)	ND	^c	50	5.3	ug/L			10/01/15 18:12	10
Toluene	ND		10	1.5	ug/L			10/01/15 18:12	10
trans-1,3-Dichloropropene	ND		10	1.5	ug/L			10/01/15 18:12	10
1,1,2-Trichloroethane	ND		10	2.0	ug/L			10/01/15 18:12	10
<b>Tetrachloroethene</b>	<b>5.8</b>	<b>J</b>	10	1.5	ug/L			10/01/15 18:12	10
2-Hexanone	ND	^c	50	1.6	ug/L			10/01/15 18:12	10
Dibromochloromethane	ND		10	1.4	ug/L			10/01/15 18:12	10
1,2-Dibromoethane (EDB)	ND		10	1.8	ug/L			10/01/15 18:12	10
Chlorobenzene	ND		10	1.4	ug/L			10/01/15 18:12	10
1,1,1,2-Tetrachloroethane	ND		10	2.8	ug/L			10/01/15 18:12	10
Ethylbenzene	ND		10	2.3	ug/L			10/01/15 18:12	10
Xylenes, Total	ND		30	4.9	ug/L			10/01/15 18:12	10
Styrene	ND		10	0.97	ug/L			10/01/15 18:12	10
Bromoform	ND		10	1.9	ug/L			10/01/15 18:12	10
1,1,2,2-Tetrachloroethane	ND		10	2.0	ug/L			10/01/15 18:12	10
Acrylonitrile	ND		200	5.5	ug/L			10/01/15 18:12	10
1,4-Dioxane	ND		2000	340	ug/L			10/01/15 18:12	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		64 - 135		10/01/15 18:12	10
Toluene-d8 (Surr)	93		71 - 118		10/01/15 18:12	10
4-Bromofluorobenzene (Surr)	91		70 - 118		10/01/15 18:12	10
Dibromofluoromethane (Surr)	107		70 - 128		10/01/15 18:12	10

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

## General Chemistry

Client Sample ID: HD-MW-47-0/1-0

Date Collected: 09/22/15 10:22

Date Received: 09/23/15 08:40

Lab Sample ID: 180-48019-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	3.8		0.25	0.048	mg/L			09/23/15 09:49	25

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

## General Chemistry - Dissolved

Client Sample ID: HD-MW-47-0/1-0

Date Collected: 09/22/15 10:22

Date Received: 09/23/15 08:40

Lab Sample ID: 180-48019-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	3.9		0.25	0.048	mg/L			09/23/15 10:00	25



# Default Detection Limits

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.28	ug/L	8260C
1,1,1-Trichloroethane	1.0	0.29	ug/L	8260C
1,1,2,2-Tetrachloroethane	1.0	0.20	ug/L	8260C
1,1,2-Trichloroethane	1.0	0.20	ug/L	8260C
1,1-Dichloroethane	1.0	0.12	ug/L	8260C
1,1-Dichloroethene	1.0	0.30	ug/L	8260C
1,2-Dibromoethane (EDB)	1.0	0.18	ug/L	8260C
1,2-Dichloroethane	1.0	0.21	ug/L	8260C
1,2-Dichloropropane	1.0	0.095	ug/L	8260C
1,4-Dioxane	200	34	ug/L	8260C
2-Butanone (MEK)	5.0	0.55	ug/L	8260C
2-Hexanone	5.0	0.16	ug/L	8260C
4-Methyl-2-pentanone (MIBK)	5.0	0.53	ug/L	8260C
Acetone	5.0	2.5	ug/L	8260C
Acrylonitrile	20	0.55	ug/L	8260C
Benzene	1.0	0.11	ug/L	8260C
Bromochloromethane	1.0	0.18	ug/L	8260C
Bromodichloromethane	1.0	0.13	ug/L	8260C
Bromoform	1.0	0.19	ug/L	8260C
Bromomethane	1.0	0.31	ug/L	8260C
Carbon disulfide	1.0	0.21	ug/L	8260C
Carbon tetrachloride	1.0	0.14	ug/L	8260C
Chlorobenzene	1.0	0.14	ug/L	8260C
Chloroethane	1.0	0.21	ug/L	8260C
Chloroform	1.0	0.17	ug/L	8260C
Chloromethane	1.0	0.28	ug/L	8260C
cis-1,2-Dichloroethene	1.0	0.24	ug/L	8260C
cis-1,3-Dichloropropene	1.0	0.19	ug/L	8260C
Dibromochloromethane	1.0	0.14	ug/L	8260C
Ethylbenzene	1.0	0.23	ug/L	8260C
Methyl tert-butyl ether	1.0	0.18	ug/L	8260C
Methylene Chloride	1.0	0.13	ug/L	8260C
Styrene	1.0	0.097	ug/L	8260C
Tetrachloroethene	1.0	0.15	ug/L	8260C
Toluene	1.0	0.15	ug/L	8260C
trans-1,2-Dichloroethene	1.0	0.17	ug/L	8260C
trans-1,3-Dichloropropene	1.0	0.15	ug/L	8260C
Trichloroethene	1.0	0.14	ug/L	8260C
Vinyl chloride	1.0	0.23	ug/L	8260C
Xylenes, Total	3.0	0.49	ug/L	8260C

## General Chemistry

Analyte	RL	MDL	Units	Method
Cr (VI)	0.010	0.0019	mg/L	7196A

## General Chemistry - Dissolved

Analyte	RL	MDL	Units	Method
Cr (VI)	0.010	0.0019	mg/L	7196A

# Surrogate Summary

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

**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 (64-135)	TOL (71-118)	BFB (70-118)	DBFM (70-128)
180-48019-1	HD-MW-47-0/1-0	94	94	90	104
180-48019-2	HD-MW-49D-0/1-0	96	93	87	106
180-48019-3	HD-MW-12-0/1-0	97	97	90	106
180-48019-3 - DL	HD-MW-12-0/1-0	99	93	91	107
180-48019-4	HD-MW-9-0/1-0	95	95	87	108
180-48019-5	HD-QC6-0/1-2	99	97	91	109
180-48019-6	HD-QC2-0/1-3	99	93	89	109
180-48019-7	HD-QC2-0/1-4	97	93	89	106
LCS 180-155398/10	Lab Control Sample	87	100	98	92
LCS 180-155577/12	Lab Control Sample	80	90	94	88
MB 180-155398/4	Method Blank	96	95	90	107
MB 180-155577/7	Method Blank	97	95	88	99

### 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: 180-48019-1

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

**Lab Sample ID: MB 180-155398/4**

**Matrix: Water**

**Analysis Batch: 155398**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			09/30/15 12:23	1
Vinyl chloride	ND		1.0	0.23	ug/L			09/30/15 12:23	1
Bromomethane	ND		1.0	0.31	ug/L			09/30/15 12:23	1
Chloroethane	ND		1.0	0.21	ug/L			09/30/15 12:23	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			09/30/15 12:23	1
Acetone	ND		5.0	2.5	ug/L			09/30/15 12:23	1
Carbon disulfide	ND		1.0	0.21	ug/L			09/30/15 12:23	1
Methylene Chloride	ND		1.0	0.13	ug/L			09/30/15 12:23	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			09/30/15 12:23	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			09/30/15 12:23	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			09/30/15 12:23	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			09/30/15 12:23	1
Bromochloromethane	ND		1.0	0.18	ug/L			09/30/15 12:23	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			09/30/15 12:23	1
Chloroform	ND		1.0	0.17	ug/L			09/30/15 12:23	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			09/30/15 12:23	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			09/30/15 12:23	1
Benzene	ND		1.0	0.11	ug/L			09/30/15 12:23	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			09/30/15 12:23	1
Trichloroethene	ND		1.0	0.14	ug/L			09/30/15 12:23	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			09/30/15 12:23	1
Bromodichloromethane	ND		1.0	0.13	ug/L			09/30/15 12:23	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			09/30/15 12:23	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			09/30/15 12:23	1
Toluene	ND		1.0	0.15	ug/L			09/30/15 12:23	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			09/30/15 12:23	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			09/30/15 12:23	1
Tetrachloroethene	ND		1.0	0.15	ug/L			09/30/15 12:23	1
2-Hexanone	ND		5.0	0.16	ug/L			09/30/15 12:23	1
Dibromochloromethane	ND		1.0	0.14	ug/L			09/30/15 12:23	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			09/30/15 12:23	1
Chlorobenzene	ND		1.0	0.14	ug/L			09/30/15 12:23	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			09/30/15 12:23	1
Ethylbenzene	ND		1.0	0.23	ug/L			09/30/15 12:23	1
Xylenes, Total	ND		3.0	0.49	ug/L			09/30/15 12:23	1
Styrene	ND		1.0	0.097	ug/L			09/30/15 12:23	1
Bromoform	ND		1.0	0.19	ug/L			09/30/15 12:23	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			09/30/15 12:23	1
Acrylonitrile	ND		20	0.55	ug/L			09/30/15 12:23	1
1,4-Dioxane	ND		200	34	ug/L			09/30/15 12:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 135		09/30/15 12:23	1
Toluene-d8 (Surr)	95		71 - 118		09/30/15 12:23	1
4-Bromofluorobenzene (Surr)	90		70 - 118		09/30/15 12:23	1
Dibromofluoromethane (Surr)	107		70 - 128		09/30/15 12:23	1

# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Lab Sample ID: LCS 180-155398/10**

**Matrix: Water**

**Analysis Batch: 155398**

**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	10.7		ug/L		107	50 - 139
Vinyl chloride	10.0	10.2		ug/L		102	53 - 138
Bromomethane	10.0	11.5		ug/L		115	33 - 150
Chloroethane	10.0	9.51		ug/L		95	36 - 142
1,1-Dichloroethene	10.0	9.59		ug/L		96	65 - 136
Acetone	20.0	18.2		ug/L		91	22 - 150
Carbon disulfide	10.0	9.79		ug/L		98	54 - 132
Methylene Chloride	10.0	9.44		ug/L		94	63 - 129
trans-1,2-Dichloroethene	10.0	9.45		ug/L		94	73 - 126
Methyl tert-butyl ether	10.0	9.50		ug/L		95	64 - 123
1,1-Dichloroethane	10.0	9.38		ug/L		94	73 - 126
cis-1,2-Dichloroethene	10.0	9.34		ug/L		93	70 - 120
Bromochloromethane	10.0	10.4		ug/L		104	70 - 127
2-Butanone (MEK)	20.0	19.1		ug/L		95	39 - 138
Chloroform	10.0	9.14		ug/L		91	72 - 127
1,1,1-Trichloroethane	10.0	9.41		ug/L		94	63 - 133
Carbon tetrachloride	10.0	9.69		ug/L		97	55 - 150
Benzene	10.0	9.48		ug/L		95	80 - 120
1,2-Dichloroethane	10.0	8.81		ug/L		88	68 - 132
Trichloroethene	10.0	10.2		ug/L		102	73 - 120
1,2-Dichloropropane	10.0	9.37		ug/L		94	76 - 124
Bromodichloromethane	10.0	9.52		ug/L		95	66 - 130
cis-1,3-Dichloropropene	10.0	8.85		ug/L		88	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	17.9		ug/L		90	45 - 145
Toluene	10.0	10.4		ug/L		104	80 - 123
trans-1,3-Dichloropropene	10.0	9.72		ug/L		97	65 - 125
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	77 - 127
Tetrachloroethene	10.0	11.4		ug/L		114	70 - 135
2-Hexanone	20.0	17.7		ug/L		88	25 - 132
Dibromochloromethane	10.0	10.2		ug/L		102	60 - 140
1,2-Dibromoethane (EDB)	10.0	10.4		ug/L		104	74 - 123
Chlorobenzene	10.0	10.6		ug/L		106	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.5		ug/L		105	63 - 140
Ethylbenzene	10.0	10.8		ug/L		108	72 - 126
Xylenes, Total	20.0	22.1		ug/L		111	76 - 128
Styrene	10.0	11.2		ug/L		112	71 - 127
Bromoform	10.0	9.76		ug/L		98	46 - 150
1,1,2,2-Tetrachloroethane	10.0	10.4		ug/L		104	62 - 125
Acrylonitrile	100	96.8		ug/L		97	30 - 140
1,4-Dioxane	200	204		ug/L		102	10 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		64 - 135
Toluene-d8 (Surr)	100		71 - 118
4-Bromofluorobenzene (Surr)	98		70 - 118
Dibromofluoromethane (Surr)	92		70 - 128

# QC Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Lab Sample ID: MB 180-1555777**

**Matrix: Water**

**Analysis Batch: 155577**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.28	ug/L			10/01/15 14:45	1
Vinyl chloride	ND		1.0	0.23	ug/L			10/01/15 14:45	1
Bromomethane	ND		1.0	0.31	ug/L			10/01/15 14:45	1
Chloroethane	ND		1.0	0.21	ug/L			10/01/15 14:45	1
1,1-Dichloroethene	ND		1.0	0.30	ug/L			10/01/15 14:45	1
Acetone	ND		5.0	2.5	ug/L			10/01/15 14:45	1
Carbon disulfide	ND		1.0	0.21	ug/L			10/01/15 14:45	1
Methylene Chloride	ND		1.0	0.13	ug/L			10/01/15 14:45	1
trans-1,2-Dichloroethene	ND		1.0	0.17	ug/L			10/01/15 14:45	1
Methyl tert-butyl ether	ND		1.0	0.18	ug/L			10/01/15 14:45	1
1,1-Dichloroethane	ND		1.0	0.12	ug/L			10/01/15 14:45	1
cis-1,2-Dichloroethene	ND		1.0	0.24	ug/L			10/01/15 14:45	1
Bromochloromethane	ND		1.0	0.18	ug/L			10/01/15 14:45	1
2-Butanone (MEK)	ND		5.0	0.55	ug/L			10/01/15 14:45	1
Chloroform	ND		1.0	0.17	ug/L			10/01/15 14:45	1
1,1,1-Trichloroethane	ND		1.0	0.29	ug/L			10/01/15 14:45	1
Carbon tetrachloride	ND		1.0	0.14	ug/L			10/01/15 14:45	1
Benzene	ND		1.0	0.11	ug/L			10/01/15 14:45	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/01/15 14:45	1
Trichloroethene	ND		1.0	0.14	ug/L			10/01/15 14:45	1
1,2-Dichloropropane	ND		1.0	0.095	ug/L			10/01/15 14:45	1
Bromodichloromethane	ND		1.0	0.13	ug/L			10/01/15 14:45	1
cis-1,3-Dichloropropene	ND		1.0	0.19	ug/L			10/01/15 14:45	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53	ug/L			10/01/15 14:45	1
Toluene	ND		1.0	0.15	ug/L			10/01/15 14:45	1
trans-1,3-Dichloropropene	ND		1.0	0.15	ug/L			10/01/15 14:45	1
1,1,2-Trichloroethane	ND		1.0	0.20	ug/L			10/01/15 14:45	1
Tetrachloroethene	ND		1.0	0.15	ug/L			10/01/15 14:45	1
2-Hexanone	ND		5.0	0.16	ug/L			10/01/15 14:45	1
Dibromochloromethane	ND		1.0	0.14	ug/L			10/01/15 14:45	1
1,2-Dibromoethane (EDB)	ND		1.0	0.18	ug/L			10/01/15 14:45	1
Chlorobenzene	ND		1.0	0.14	ug/L			10/01/15 14:45	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.28	ug/L			10/01/15 14:45	1
Ethylbenzene	ND		1.0	0.23	ug/L			10/01/15 14:45	1
Xylenes, Total	ND		3.0	0.49	ug/L			10/01/15 14:45	1
Styrene	ND		1.0	0.097	ug/L			10/01/15 14:45	1
Bromoform	ND		1.0	0.19	ug/L			10/01/15 14:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.20	ug/L			10/01/15 14:45	1
Acrylonitrile	ND		20	0.55	ug/L			10/01/15 14:45	1
1,4-Dioxane	ND		200	34	ug/L			10/01/15 14:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		64 - 135		10/01/15 14:45	1
Toluene-d8 (Surr)	95		71 - 118		10/01/15 14:45	1
4-Bromofluorobenzene (Surr)	88		70 - 118		10/01/15 14:45	1
Dibromofluoromethane (Surr)	99		70 - 128		10/01/15 14:45	1

# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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

**Lab Sample ID: LCS 180-155577/12**

**Matrix: Water**

**Analysis Batch: 155577**

**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	9.95		ug/L		99	50 - 139
Vinyl chloride	10.0	9.09		ug/L		91	53 - 138
Bromomethane	10.0	10.4		ug/L		104	33 - 150
Chloroethane	10.0	8.45		ug/L		84	36 - 142
1,1-Dichloroethene	10.0	8.69		ug/L		87	65 - 136
Acetone	20.0	20.3		ug/L		102	22 - 150
Carbon disulfide	10.0	8.46		ug/L		85	54 - 132
Methylene Chloride	10.0	8.97		ug/L		90	63 - 129
trans-1,2-Dichloroethene	10.0	8.94		ug/L		89	73 - 126
Methyl tert-butyl ether	10.0	9.18		ug/L		92	64 - 123
1,1-Dichloroethane	10.0	8.89		ug/L		89	73 - 126
cis-1,2-Dichloroethene	10.0	9.08		ug/L		91	70 - 120
Bromochloromethane	10.0	9.66		ug/L		97	70 - 127
2-Butanone (MEK)	20.0	21.1		ug/L		106	39 - 138
Chloroform	10.0	8.67		ug/L		87	72 - 127
1,1,1-Trichloroethane	10.0	8.93		ug/L		89	63 - 133
Carbon tetrachloride	10.0	8.79		ug/L		88	55 - 150
Benzene	10.0	9.16		ug/L		92	80 - 120
1,2-Dichloroethane	10.0	8.78		ug/L		88	68 - 132
Trichloroethene	10.0	9.54		ug/L		95	73 - 120
1,2-Dichloropropane	10.0	8.97		ug/L		90	76 - 124
Bromodichloromethane	10.0	8.71		ug/L		87	66 - 130
cis-1,3-Dichloropropene	10.0	8.11		ug/L		81	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	18.9		ug/L		95	45 - 145
Toluene	10.0	9.90		ug/L		99	80 - 123
trans-1,3-Dichloropropene	10.0	8.57		ug/L		86	65 - 125
1,1,2-Trichloroethane	10.0	9.66		ug/L		97	77 - 127
Tetrachloroethene	10.0	10.1		ug/L		101	70 - 135
2-Hexanone	20.0	18.2		ug/L		91	25 - 132
Dibromochloromethane	10.0	9.29		ug/L		93	60 - 140
1,2-Dibromoethane (EDB)	10.0	9.76		ug/L		98	74 - 123
Chlorobenzene	10.0	9.88		ug/L		99	80 - 120
1,1,1,2-Tetrachloroethane	10.0	9.79		ug/L		98	63 - 140
Ethylbenzene	10.0	10.1		ug/L		101	72 - 126
Xylenes, Total	20.0	20.2		ug/L		101	76 - 128
Styrene	10.0	10.4		ug/L		104	71 - 127
Bromoform	10.0	8.66		ug/L		87	46 - 150
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	62 - 125
Acrylonitrile	100	97.7		ug/L		98	30 - 140
1,4-Dioxane	200	247		ug/L		123	10 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	80		64 - 135
Toluene-d8 (Surr)	90		71 - 118
4-Bromofluorobenzene (Surr)	94		70 - 118
Dibromofluoromethane (Surr)	88		70 - 128

# QC Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

## Method: 7196A - Chromium, Hexavalent

**Lab Sample ID: MB 180-154558/6**  
**Matrix: Water**  
**Analysis Batch: 154558**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.010	0.0019	mg/L			09/23/15 09:46	1

**Lab Sample ID: LCS 180-154558/5**  
**Matrix: Water**  
**Analysis Batch: 154558**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.260		mg/L		104	85 - 115

**Lab Sample ID: 180-48019-1 MS**  
**Matrix: Water**  
**Analysis Batch: 154558**

**Client Sample ID: HD-MW-47-0/1-0**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	3.8		6.25	9.96		mg/L		99	85 - 115

**Lab Sample ID: 180-48019-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 154558**

**Client Sample ID: HD-MW-47-0/1-0**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	3.8		6.25	9.93		mg/L		98	85 - 115	0	20

**Lab Sample ID: 180-48019-1 MS**  
**Matrix: Water**  
**Analysis Batch: 154558**

**Client Sample ID: HD-MW-47-0/1-0**  
**Prep Type: Dissolved**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	3.9		6.25	10.2		mg/L		101	85 - 115

**Lab Sample ID: 180-48019-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 154558**

**Client Sample ID: HD-MW-47-0/1-0**  
**Prep Type: Dissolved**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cr (VI)	3.9		6.25	10.3		mg/L		102	85 - 115	1	20

# QC Association Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

## GC/MS VOA

### Analysis Batch: 155398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-48019-1	HD-MW-47-0/1-0	Total/NA	Water	8260C	
180-48019-2	HD-MW-49D-0/1-0	Total/NA	Water	8260C	
180-48019-3	HD-MW-12-0/1-0	Total/NA	Water	8260C	
180-48019-5	HD-QC6-0/1-2	Total/NA	Water	8260C	
180-48019-6	HD-QC2-0/1-3	Total/NA	Water	8260C	
180-48019-7	HD-QC2-0/1-4	Total/NA	Water	8260C	
LCS 180-155398/10	Lab Control Sample	Total/NA	Water	8260C	
MB 180-155398/4	Method Blank	Total/NA	Water	8260C	

### Analysis Batch: 155577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-48019-3 - DL	HD-MW-12-0/1-0	Total/NA	Water	8260C	
180-48019-4	HD-MW-9-0/1-0	Total/NA	Water	8260C	
LCS 180-155577/12	Lab Control Sample	Total/NA	Water	8260C	
MB 180-155577/7	Method Blank	Total/NA	Water	8260C	

## General Chemistry

### Analysis Batch: 154558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-48019-1	HD-MW-47-0/1-0	Dissolved	Water	7196A	
180-48019-1	HD-MW-47-0/1-0	Total/NA	Water	7196A	
180-48019-1 MS	HD-MW-47-0/1-0	Dissolved	Water	7196A	
180-48019-1 MS	HD-MW-47-0/1-0	Total/NA	Water	7196A	
180-48019-1 MSD	HD-MW-47-0/1-0	Dissolved	Water	7196A	
180-48019-1 MSD	HD-MW-47-0/1-0	Total/NA	Water	7196A	
LCS 180-154558/5	Lab Control Sample	Total/NA	Water	7196A	
MB 180-154558/6	Method Blank	Total/NA	Water	7196A	



# Lab Chronicle

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

**Client Sample ID: HD-MW-47-0/1-0**

**Lab Sample ID: 180-48019-1**

Date Collected: 09/22/15 10:22

Matrix: Water

Date Received: 09/23/15 08:40

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	155398	09/30/15 16:15	DLF	TAL PIT
	Instrument ID: CHHP5									
Dissolved	Analysis	7196A		25	25.0 mL	25.0 mL	154558	09/23/15 10:00	JLR	TAL PIT
	Instrument ID: GENESYS10S									
Total/NA	Analysis	7196A		25	25.0 mL	25.0 mL	154558	09/23/15 09:49	JLR	TAL PIT
	Instrument ID: GENESYS10S									

**Client Sample ID: HD-MW-49D-0/1-0**

**Lab Sample ID: 180-48019-2**

Date Collected: 09/22/15 12:57

Matrix: Water

Date Received: 09/23/15 08:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		200	5 mL	5 mL	155398	09/30/15 17:03	DLF	TAL PIT
	Instrument ID: CHHP5									

**Client Sample ID: HD-MW-12-0/1-0**

**Lab Sample ID: 180-48019-3**

Date Collected: 09/22/15 14:00

Matrix: Water

Date Received: 09/23/15 08:40

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	155398	09/30/15 17:27	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	8260C	DL	10	5 mL	5 mL	155577	10/01/15 18:12	DLF	TAL PIT
	Instrument ID: CHHP5									

**Client Sample ID: HD-MW-9-0/1-0**

**Lab Sample ID: 180-48019-4**

Date Collected: 09/22/15 12:40

Matrix: Water

Date Received: 09/23/15 08:40

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	155577	10/01/15 18:36	DLF	TAL PIT
	Instrument ID: CHHP5									

**Client Sample ID: HD-QC6-0/1-2**

**Lab Sample ID: 180-48019-5**

Date Collected: 09/22/15 12:00

Matrix: Water

Date Received: 09/23/15 08:40

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	155398	09/30/15 16:39	DLF	TAL PIT
	Instrument ID: CHHP5									

# Lab Chronicle

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

**Client Sample ID: HD-QC2-0/1-3**

**Date Collected: 09/22/15 15:00**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-6**

**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	155398	09/30/15 19:28	DLF	TAL PIT
Instrument ID: CHHP5										

**Client Sample ID: HD-QC2-0/1-4**

**Date Collected: 09/22/15 15:05**

**Date Received: 09/23/15 08:40**

**Lab Sample ID: 180-48019-7**

**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	155398	09/30/15 19:04	DLF	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

DLF = Donald Ferguson

JLR = Jennifer Rumble

# Certification Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

## Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-16

# Method Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-48019-1

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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
7196A	Chromium, Hexavalent	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: 180-48019-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-48019-1	HD-MW-47-0/1-0	Water	09/22/15 10:22	09/23/15 08:40
180-48019-2	HD-MW-49D-0/1-0	Water	09/22/15 12:57	09/23/15 08:40
180-48019-3	HD-MW-12-0/1-0	Water	09/22/15 14:00	09/23/15 08:40
180-48019-4	HD-MW-9-0/1-0	Water	09/22/15 12:40	09/23/15 08:40
180-48019-5	HD-QC6-0/1-2	Water	09/22/15 12:00	09/23/15 08:40
180-48019-6	HD-QC2-0/1-3	Water	09/22/15 15:00	09/23/15 08:40
180-48019-7	HD-QC2-0/1-4	Water	09/22/15 15:05	09/23/15 08:40

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Instrument ID: CHHP5 Analysis Batch Number: 151868Lab Sample ID: IC 180-151868/6 Client Sample ID: \_\_\_\_\_Date Analyzed: 08/26/15 15:04 Lab File ID: 50826006.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.65	Incomplete Integration	fergusond	08/27/15 10:07
Acetone	3.45	Peak Tail	fergusond	08/27/15 10:07

Lab Sample ID: IC 180-151868/12 Client Sample ID: \_\_\_\_\_Date Analyzed: 08/26/15 17:04 Lab File ID: 50826012.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Incomplete Integration	fergusond	08/27/15 10:34

Lab Sample ID: IC 180-151868/14 Client Sample ID: \_\_\_\_\_Date Analyzed: 08/26/15 17:52 Lab File ID: 50826014.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.70	Incomplete Integration	fergusond	08/27/15 10:43

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Instrument ID: CHHP5 Analysis Batch Number: 155398

Lab Sample ID: CCVIS 180-155398/2 Client Sample ID: \_\_\_\_\_

Date Analyzed: 09/30/15 11:16 Lab File ID: 50930002.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Incomplete Integration	fergusond	09/30/15 11:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Instrument ID: CHHP5 Analysis Batch Number: 155577

Lab Sample ID: CCVIS 180-155577/2 Client Sample ID: \_\_\_\_\_

Date Analyzed: 10/01/15 13:46 Lab File ID: 51001002.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.03	Incomplete Integration	fergusond	10/01/15 14:01

Lab Sample ID: 180-48019-4 Client Sample ID: HD-MW-9-0/1-0

Date Analyzed: 10/01/15 18:36 Lab File ID: 51001016.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrachloroethene	9.52	Incomplete Integration	fergusond	10/02/15 07:45



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration				
					Reagent ID	Volume Added						
VOA8260INT_00040	09/03/15	08/03/15	Methanol, Lot 85233	10 mL	VOA8260INTRES_00088	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_00088	07/31/19		Restek, Lot A0104742		(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_00042	10/11/15	09/11/15	Methanol, Lot 99494	10 mL	VOA8260INTRES_00068	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_00068	02/01/18		Restek, Lot A093504		(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_00040	09/03/15	08/03/15	Methanol, Lot 85233	100 mL	VOA8260SURRES_00067	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_00067	01/31/19		Restek, Lot A0100424		(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_00042	10/11/15	09/11/15	Methanol, Lot 99494	100 mL	VOA8260SURRES_00077	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_00077	01/31/19		Restek, Lot A0101000		(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				
VOA8260VOA2ND_00144	10/01/15	09/24/15	Methanol, Lot 99494	10 mL	VOA8260GAS2ND_00114	0.1 mL	Bromomethane	25 ug/mL				
							Chloroethane	25 ug/mL				
							Chloromethane	25 ug/mL				
							Vinyl chloride	25 ug/mL				
					VOA8260VOA2ND_00141					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
											1,2-Dichloroethane	25 ug/mL
											1,2-Dichloropropane	25 ug/mL
											1,4-Dioxane	500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
.VOA8260GAS2ND_00114	04/30/18		Restek, Lot A0111273			(Purchased Reagent)	Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOA2ND_00141	10/03/15	09/03/15	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00036	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
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Dibromochloromethane	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
..VOA8260MEGA2_00036	01/31/17		Restek, Lot A0108163		(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
VOA8260VOAPRI_00139	09/01/15	08/25/15	Methanol, Lot 85233	10 mL	VOA8260GAS1ST_00113	0.1 mL	Bromomethane	25 ug/mL
							Butadiene	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Dichlorodifluoromethane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorofluoromethane	25 ug/mL
							Trichlorofluoromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00136	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
							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-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							Isopropylbenzene	25 ug/mL
							m-Xylene & p-Xylene	25 ug/mL
							Methyl acetate	125 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_00113	04/30/18		Restek, Lot A0110070			(Purchased Reagent)	Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00136	09/06/15	08/06/15	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00048	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_00032	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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	1250 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
							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_00048	04/30/18		Restek, Lot A0110400			(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_00032	02/28/16		Restek, Lot A0108166			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

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



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration					
					Reagent ID	Volume Added							
VOA8260VOAPRI_00145	10/01/15	09/24/15	Methanol, Lot 99494	10 mL	VOA8260GAS1ST_00117	0.1 mL	Bromomethane	25 ug/mL					
							Chloroethane	25 ug/mL					
							Chloromethane	25 ug/mL					
							Vinyl chloride	25 ug/mL					
					VOA8260VOAPRI_00142						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
												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_00117	04/30/18		Restek, Lot A0110070				(Purchased Reagent)	Bromomethane	2500 ug/mL				
								Chloroethane	2500 ug/mL				
								Chloromethane	2500 ug/mL				
								Vinyl chloride	2500 ug/mL				
.VOA8260VOAPRI_00142	10/03/15	09/03/15	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00033	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												

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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_00033	02/28/16		Restek, Lot A0108166		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
<b>VOAACROLEINPR_00006</b>	09/11/15	08/11/15	Methanol, Lot 85233	100 mL	VOAACRORES_00077	0.125 mL	Acrolein	25 ug/mL
.VOAACRORES_00077	09/30/15		Restek, Lot A0111006		(Purchased Reagent)		Acrolein	20000 ug/mL
<b>VOAVAPRI_00006</b>	08/31/15	08/25/15	Methanol, Lot 85233	50 mL	VOA8260VARES_00054	0.25 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00054	08/31/15		Restek, Lot A0109190		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
<b>voaWEE1stRest_00001</b>	09/21/15	08/21/15	Methanol, Lot 85233	25 mL	VOARESEE1ST_00021	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_00021	09/30/16		Restek, Lot A0109701		(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
							4-Chlorobenzotrifluoride	5000 ug/mL
<b>voaWKet1 Rest_00001</b>	09/11/15	08/11/15	Methanol, Lot 85233	50 mL	VOA8260KET1ST_00049	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_00049	04/30/18		Restek, Lot A0110400		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetone	12500 ug/mL
<b>voaWKet1stRes_00001</b>	10/14/15	09/14/15	Methanol, Lot 99494	50 mL	VOA8260KET1ST_00051	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_00051	04/30/18		Restek, Lot A0110400		(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>voaWKetmix2nd_00002</b>	10/22/15	09/22/15	Methanol, Lot 99494	50 mL	VOA8260KET2ND_00054	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_00054	05/31/18		Restek, Lot A0110970		(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>WCr6P50i_00030</b>	12/04/15	07/24/15	DI Water, Lot NA	100 mL	WCr1000S_00003	5 mL	Cr (VI)	50 mg/L
.WCr1000S_00003	01/08/17		LabChem, Inc., Lot E007-10		(Purchased Reagent)		Cr (VI)	1000 ppm
<b>WCr6P5i_00719</b>	09/23/15	09/22/15	DI Water, Lot NA	200 mL	WCr6S50SP_00045	20 mL	Cr (VI)	4.99976 mg/L
.WCr6S50SP_00045	12/04/15	07/24/15	DI Water, Lot NA	200 mL	WCR+6 1000 P 00006	10 mL	Cr (VI)	49.9976 mg/L
..WCR+6 1000 P 00006	12/04/15	06/04/15	DI Water, Lot NA	250 mL	WK2CrO7P_00004	0.7072 g	Cr (VI)	999.953 mg/L
...WK2CrO7P_00004	10/17/17		J.T.Baker, Lot 0000034869		(Purchased Reagent)		Cr (VI)	0.35349 g/g
<b>WCr6S50SP_00045</b>	12/04/15	07/24/15	DI Water, Lot NA	200 mL	WCR+6 1000 P 00006	10 mL	Cr (VI)	49.9976 mg/L
.WCR+6 1000 P 00006	12/04/15	06/04/15	DI Water, Lot NA	250 mL	WK2CrO7P_00004	0.7072 g	Cr (VI)	999.953 mg/L
..WK2CrO7P_00004	10/17/17		J.T.Baker, Lot 0000034869		(Purchased Reagent)		Cr (VI)	0.35349 g/g

Reagent

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**VOA8260GAS1ST\_00113**



# 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. :** 569722 **Lot No.:** A0110070  
**Description :** 8260 List 1 / Std #3 Gases (2015)  
8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** April 30, 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Dichlorodifluoromethane (CFC-12)	2,499.9 µg/mL	+/-	17.9502	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q167-08)		+/-	30.0934	µg/mL	Unstressed
	Purity 99%		+/-	34.1055	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,500.1 µg/mL	+/-	17.2963	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBC8470V)		+/-	29.7101	µg/mL	Unstressed
	Purity 99%		+/-	33.7686	µg/mL	Stressed
3	Vinyl chloride	2,500.2 µg/mL	+/-	16.5642	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 17542)		+/-	29.2906	µg/mL	Unstressed
	Purity 99%		+/-	33.4004	µg/mL	Stressed
4	1,3-Butadiene	2,500.0 µg/mL	+/-	17.0072	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBF3387V)		+/-	29.5416	µg/mL	Unstressed
	Purity 99%		+/-	33.6200	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,499.8 µg/mL	+/-	18.9451	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	30.6969	µg/mL	Unstressed
	Purity 99%		+/-	34.6391	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,500.3 µg/mL	+/-	17.6395	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot SHBD1717V)		+/-	29.9122	µg/mL	Unstressed
	Purity 99%		+/-	33.9470	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.2 µg/mL	+/-	16.7318	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot Q9B-58)		+/-	29.3854	µg/mL	Unstressed
	Purity 99%		+/-	33.4835	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)	2,500.3 µg/mL	+/- 16.5866	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)		+/- 29.3037	µg/mL	Unstressed
	Purity 99%		+/- 33.4120	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)

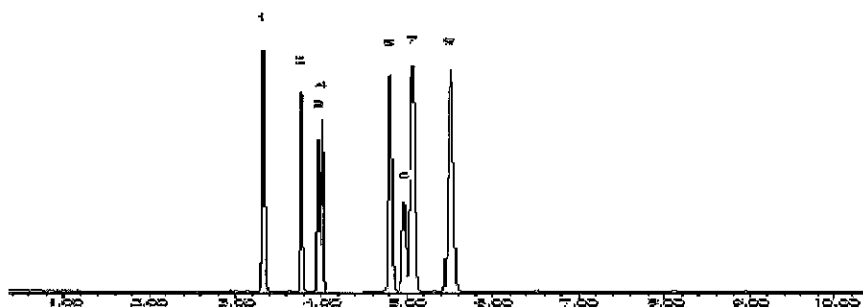
**Carrier Gas:**  
helium-constant flow 2.0 mL/min.

**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.

*[Signature]*  
F. Joseph Tallon - Mix Technician

**Date Mixed:** 02-Apr-2015      **Balance:** B251644995

*[Signature]*  
Tyler Brown - QA Analyst

**Date Passed:** 08-Apr-2015

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

Reagent

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**VOA8260GAS1ST\_00117**





# CERTIFIED REFERENCE MATERIAL

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 Bellefonte, PA 16823-8812  
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 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.:** A0110070  
**Description :** 8260 List 1 / Std #3 Gases (2015)  
8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** April 30, 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Dichlorodifluoromethane (CFC-12)	2,499.9 µg/mL	+/-	17.9502	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q167-08)		+/-	30.0934	µg/mL	Unstressed
	Purity 99%		+/-	34.1055	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,500.1 µg/mL	+/-	17.2963	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBC8470V)		+/-	29.7101	µg/mL	Unstressed
	Purity 99%		+/-	33.7686	µg/mL	Stressed
3	Vinyl chloride	2,500.2 µg/mL	+/-	16.5642	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 17542)		+/-	29.2906	µg/mL	Unstressed
	Purity 99%		+/-	33.4004	µg/mL	Stressed
4	1,3-Butadiene	2,500.0 µg/mL	+/-	17.0072	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBF3387V)		+/-	29.5416	µg/mL	Unstressed
	Purity 99%		+/-	33.6200	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,499.8 µg/mL	+/-	18.9451	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	30.6969	µg/mL	Unstressed
	Purity 99%		+/-	34.6391	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,500.3 µg/mL	+/-	17.6395	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot SHBD1717V)		+/-	29.9122	µg/mL	Unstressed
	Purity 99%		+/-	33.9470	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,500.2 µg/mL	+/-	16.7318	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot Q9B-58)		+/-	29.3854	µg/mL	Unstressed
	Purity 99%		+/-	33.4835	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)	2,500.3 µg/mL	+/- 16.5866	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)		+/- 29.3037	µg/mL	Unstressed
	Purity 99%		+/- 33.4120	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)

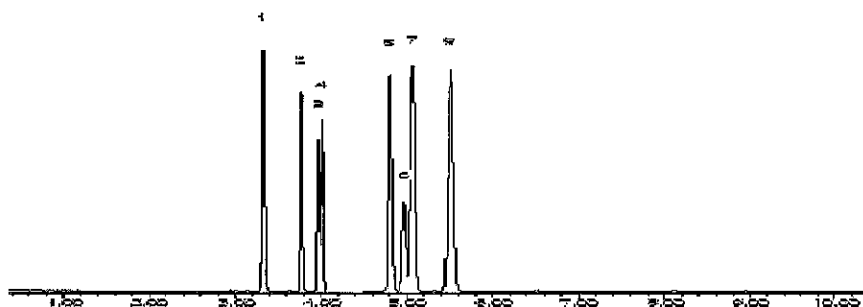
**Carrier Gas:**  
helium-constant flow 2.0 mL/min.

**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.

*[Signature]*  
F. Joseph Tallon - Mix Technician

**Date Mixed:** 02-Apr-2015      **Balance:** B251644995

*[Signature]*  
Tyler Brown - QA Analyst

**Date Passed:** 08-Apr-2015

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

Reagent

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**VOA8260GAS2ND\_00114**



# 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. : 569722.SEC Lot No.: A0111273

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 : May 31, 2018 Storage: 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)			
1	Dichlorodifluoromethane (CFC-12)	2,497.6 µg/mL	+/-	24.0984	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 21773)		+/-	34.1039	µg/mL	Unstressed
	Purity 99%		+/-	37.6853	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.8 µg/mL	+/-	21.5368	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/-	32.3897	µg/mL	Unstressed
	Purity 99%		+/-	36.1592	µg/mL	Stressed
3	Vinyl chloride	2,492.0 µg/mL	+/-	23.1023	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/-	33.3685	µg/mL	Unstressed
	Purity 99%		+/-	37.0056	µg/mL	Stressed
4	1,3-Butadiene	2,488.6 µg/mL	+/-	19.2643	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/-	30.8102	µg/mL	Unstressed
	Purity 99%		+/-	34.7063	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,491.9 µg/mL	+/-	20.7776	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/-	31.8022	µg/mL	Unstressed
	Purity 99%		+/-	35.5993	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,516.0 µg/mL	+/-	19.4764	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/-	31.1495	µg/mL	Unstressed
	Purity 99%		+/-	35.0885	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,503.3 µg/mL	+/-	18.8823	µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/-	30.6846	µg/mL	Unstressed
	Purity 99%		+/-	34.6386	µg/mL	Stressed

Reagent

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**VOA8260INTRES\_00068**



110 Benner Circle  
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## Certificate of Analysis

**FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.**

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

**Catalog No. :** 567649 **Lot No.:** A093504  
**Description :** 8260 Internal Standard  
8260 Internal Standard 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul  
**Container Size :** 5 mL **Pkg Amt:** > 5 mL  
**Expiration Date :** February 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

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

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

Reagent

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**VOA8260INTRES\_00088**



# 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. :** 567649 **Lot No.:** A0104742  
**Description :** 8260 Internal Standard  
8260 Internal Standard 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul  
**Container Size :** 5 mL **Pkg Amt:** > 5 mL  
**Expiration Date :** July 31, 2019 **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 I201P5)	5,003.0 µg/mL	+/- 29.0879	µg/mL	Gravimetric
			+/- 106.1005	µg/mL	Unstressed
			+/- 106.5713	µg/mL	Stressed
2	Fluorobenzene CAS # 462-06-6 Purity 99% (Lot 1380033)	250.8 µg/mL	+/- 1.4795	µg/mL	Gravimetric
			+/- 5.3247	µg/mL	Unstressed
			+/- 5.3483	µg/mL	Stressed
3	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99% (Lot 11C-596)	5,009.6 µg/mL	+/- 29.1262	µg/mL	Gravimetric
			+/- 106.2405	µg/mL	Unstressed
			+/- 106.7119	µg/mL	Stressed
4	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99% (Lot PR-22736)	250.8 µg/mL	+/- 1.4795	µg/mL	Gravimetric
			+/- 5.3247	µg/mL	Unstressed
			+/- 5.3483	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99% (Lot PR-18488)	250.8 µg/mL	+/- 1.4795	µg/mL	Gravimetric
			+/- 5.3247	µg/mL	Unstressed
			+/- 5.3483	µg/mL	Stressed

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



Reagent

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**VOA8260KET1ST\_00048**

# RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle  
 Bellefonte, PA 16823-8812  
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 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.:** A0110400  
**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 :** April 30, 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,506.8 µg/mL	+/-	73.2301	µg/mL	Gravimetric
	CAS # 67-64-1 (Lot 07196AK)		+/-	665.6407	µg/mL	Unstressed
	Purity 99%		+/-	666.3747	µg/mL	Stressed
2	2-Butanone (MEK)	12,504.8 µg/mL	+/-	73.2184	µg/mL	Gravimetric
	CAS # 78-93-3 (Lot BCBH7802V)		+/-	665.5343	µg/mL	Unstressed
	Purity 99%		+/-	666.2681	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,509.2 µg/mL	+/-	73.2441	µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBF5332V)		+/-	665.7684	µg/mL	Unstressed
	Purity 99%		+/-	666.5025	µg/mL	Stressed
4	2-Hexanone	12,501.6 µg/mL	+/-	73.1996	µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKBN7380V)		+/-	665.3640	µg/mL	Unstressed
	Purity 99%		+/-	666.0976	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\_00049**

# RESTEK® 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. :** 569721 **Lot No.:** A0110400  
**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 :** April 30, 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,506.8 µg/mL	+/-	73.2301	µg/mL	Gravimetric
	CAS # 67-64-1 (Lot 07196AK)		+/-	665.6407	µg/mL	Unstressed
	Purity 99%		+/-	666.3747	µg/mL	Stressed
2	2-Butanone (MEK)	12,504.8 µg/mL	+/-	73.2184	µg/mL	Gravimetric
	CAS # 78-93-3 (Lot BCBH7802V)		+/-	665.5343	µg/mL	Unstressed
	Purity 99%		+/-	666.2681	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,509.2 µg/mL	+/-	73.2441	µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBF5332V)		+/-	665.7684	µg/mL	Unstressed
	Purity 99%		+/-	666.5025	µg/mL	Stressed
4	2-Hexanone	12,501.6 µg/mL	+/-	73.1996	µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKBN7380V)		+/-	665.3640	µg/mL	Unstressed
	Purity 99%		+/-	666.0976	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\_00051**

# RESTEK® 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. :** 569721 **Lot No.:** A0110400  
**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 :** April 30, 2018 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,506.8 µg/mL	+/-	73.2301	µg/mL	Gravimetric
	CAS # 67-64-1 (Lot 07196AK)		+/-	665.6407	µg/mL	Unstressed
	Purity 99%		+/-	666.3747	µg/mL	Stressed
2	2-Butanone (MEK)	12,504.8 µg/mL	+/-	73.2184	µg/mL	Gravimetric
	CAS # 78-93-3 (Lot BCBH7802V)		+/-	665.5343	µg/mL	Unstressed
	Purity 99%		+/-	666.2681	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,509.2 µg/mL	+/-	73.2441	µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBF5332V)		+/-	665.7684	µg/mL	Unstressed
	Purity 99%		+/-	666.5025	µg/mL	Stressed
4	2-Hexanone	12,501.6 µg/mL	+/-	73.1996	µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKBN7380V)		+/-	665.3640	µg/mL	Unstressed
	Purity 99%		+/-	666.0976	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\_00054**



# 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.

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**Catalog No. :** 569721.sec                      **Lot No.:** A0110970  
**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 :** May 31, 2018                      **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)			
1	Acetone	12,528.0 µg/mL	+/-	73.3542	µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/-	666.7690	µg/mL	Unstressed
	Purity 99%		+/-	667.5042	µg/mL	Stressed
2	2-Butanone (MEK)	12,530.0 µg/mL	+/-	73.3659	µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/-	666.8755	µg/mL	Unstressed
	Purity 99%		+/-	667.6108	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,585.0 µg/mL	+/-	73.6879	µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/-	669.8027	µg/mL	Unstressed
	Purity 99%		+/-	670.5412	µg/mL	Stressed
4	2-Hexanone	12,516.0 µg/mL	+/-	73.2839	µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot ZSVCD-FF)		+/-	666.1304	µg/mL	Unstressed
	Purity 99%		+/-	666.8648	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\_00032**



# CERTIFIED REFERENCE MATERIAL

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 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. :** 569720 **Lot No.:** A0108166  
**Description :** 8260 List 1 / Std #1 MegaMix (2015)  
8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** January 31, 2017 **Storage:** 0°C or colder

### CERTIFIED VALUES

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

8	Methylene chloride (dichloromethane)		2,511.3	µg/mL	+/-	14.6006	µg/mL	Gravimetric	
	<b>CAS #</b> 75-09-2	(Lot SHBD4974V)				+/-	133.6432	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.7906	µg/mL	Stressed
9	Carbon disulfide		2,511.7	µg/mL	+/-	14.6035	µg/mL	Gravimetric	
	<b>CAS #</b> 75-15-0	(Lot C30Y997)				+/-	133.6693	µg/mL	Unstressed
	<b>Purity</b> 98%					+/-	133.8167	µg/mL	Stressed
10	Acrylonitrile		25,017.1	µg/mL	+/-	145.4441	µg/mL	Gravimetric	
	<b>CAS #</b> 107-13-1	(Lot 10172706)				+/-	1,331.3554	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	1,332.8236	µg/mL	Stressed
11	cis-1,2-Dichloroethene		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric	
	<b>CAS #</b> 156-59-2	(Lot MKBG8424V)				+/-	133.2507	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.3977	µg/mL	Stressed
12	n-Hexane (C6)		2,511.9	µg/mL	+/-	14.6043	µg/mL	Gravimetric	
	<b>CAS #</b> 110-54-3	(Lot SHBF0293V)				+/-	133.6764	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.8239	µg/mL	Stressed
13	1,1-dichloroethene		2,521.3	µg/mL	+/-	14.6588	µg/mL	Gravimetric	
	<b>CAS #</b> 75-35-4	(Lot SHBD6170V)				+/-	134.1754	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	134.3233	µg/mL	Stressed
14	2,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5351	µg/mL	Gravimetric	
	<b>CAS #</b> 594-20-7	(Lot BCBH9246V)				+/-	133.0434	µg/mL	Unstressed
	<b>Purity</b> 98%					+/-	133.1901	µg/mL	Stressed
15	trans-1,2-Dichloroethene		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric	
	<b>CAS #</b> 156-60-5	(Lot MKBH9850V)				+/-	133.3106	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.4576	µg/mL	Stressed
16	Isobutanol (2-Methyl-1-propanol)		62,553.8	µg/mL	+/-	363.6739	µg/mL	Gravimetric	
	<b>CAS #</b> 78-83-1	(Lot SHBF2852V)				+/-	3,328.9705	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	3,332.6417	µg/mL	Stressed
17	Methyl-tert-butyl ether ( MTBE )		2,504.6	µg/mL	+/-	14.5621	µg/mL	Gravimetric	
	<b>CAS #</b> 1634-04-4	(Lot SHBF1193V)				+/-	133.2906	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.4376	µg/mL	Stressed
18	Bromochloromethane		2,505.1	µg/mL	+/-	14.5650	µg/mL	Gravimetric	
	<b>CAS #</b> 74-97-5	(Lot 00004559)				+/-	133.3172	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.4642	µg/mL	Stressed
19	Tetrahydrofuran		5,000.7	µg/mL	+/-	29.0746	µg/mL	Gravimetric	
	<b>CAS #</b> 109-99-9	(Lot SHBF2660V)				+/-	266.1270	µg/mL	Unstressed
	<b>Purity</b> 97%					+/-	266.4204	µg/mL	Stressed
20	1,1,1-trichloroethane		2,508.1	µg/mL	+/-	14.5825	µg/mL	Gravimetric	
	<b>CAS #</b> 71-55-6	(Lot B14Z1114)				+/-	133.4769	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.6241	µg/mL	Stressed
21	Cyclohexane		2,504.0	µg/mL	+/-	14.5585	µg/mL	Gravimetric	
	<b>CAS #</b> 110-82-7	(Lot SHBD7873V)				+/-	133.2574	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.4043	µg/mL	Stressed
22	1,1-Dichloropropene		2,502.4	µg/mL	+/-	14.5493	µg/mL	Gravimetric	
	<b>CAS #</b> 563-58-6	(Lot PR09161302)				+/-	133.1738	µg/mL	Unstressed
	<b>Purity</b> 98%					+/-	133.3207	µg/mL	Stressed
23	carbon tetrachloride		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric	
	<b>CAS #</b> 56-23-5	(Lot SHBC1410V)				+/-	133.3239	µg/mL	Unstressed
	<b>Purity</b> 99%					+/-	133.4709	µg/mL	Stressed

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

40	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MKBP0459V)	2,503.2 µg/mL	+/- 14.5536 +/- 133.2129 +/- 133.3598	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH3877V)	2,504.3 µg/mL	+/- 14.5599 +/- 133.2707 +/- 133.4176	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBD3200V)	2,510.8 µg/mL	+/- 14.5977 +/- 133.6166 +/- 133.7639	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,502.9 µg/mL	+/- 14.5519 +/- 133.1975 +/- 133.3444	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBC9001V)	2,509.6 µg/mL	+/- 14.5912 +/- 133.5567 +/- 133.7040	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBF1720V)	1,252.6 µg/mL	+/- 7.2829 +/- 66.6619 +/- 66.7355	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	o-Xylene CAS # 95-47-6 Purity 98%	(Lot SHBC8668V)	2,503.7 µg/mL	+/- 14.5565 +/- 133.2390 +/- 133.3859	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBF3427V)	1,253.3 µg/mL	+/- 7.2865 +/- 66.6952 +/- 66.7688	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5 Purity 99%	(Lot 10182421)	2,503.5 µg/mL	+/- 14.5556 +/- 133.2307 +/- 133.3777	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10169400)	2,502.5 µg/mL	+/- 14.5498 +/- 133.1775 +/- 133.3244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBC3410V)	2,507.8 µg/mL	+/- 14.5803 +/- 133.4569 +/- 133.6041	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,1,1,2-Tetrachloroethane CAS # 630-20-6 Purity 99%	(Lot MKBS3769V)	2,510.3 µg/mL	+/- 14.5948 +/- 133.5900 +/- 133.7373	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	chloroform CAS # 67-66-3 Purity 99%	(Lot SHBB7498V)	2,501.3 µg/mL	+/- 14.5425 +/- 133.1110 +/- 133.2578	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99%	(Lot 1428739V)	2,502.5 µg/mL	+/- 14.5498 +/- 133.1775 +/- 133.3244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene CAS # 110-57-6 Purity 96%	(Lot MKBP5371V)	2,499.5 µg/mL	+/- 14.5322 +/- 133.0168 +/- 133.1635	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1 Purity 99%	(Lot MKBQ8049V)	2,500.3 µg/mL	+/- 14.5367 +/- 133.0578 +/- 133.2045	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

72	1,2,3-Trichlorobenzene		2,503.4 µg/mL	+/-	14.5548	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	133.2241	µg/mL	Unstressed
	Purity 99%			+/-	133.3710	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)

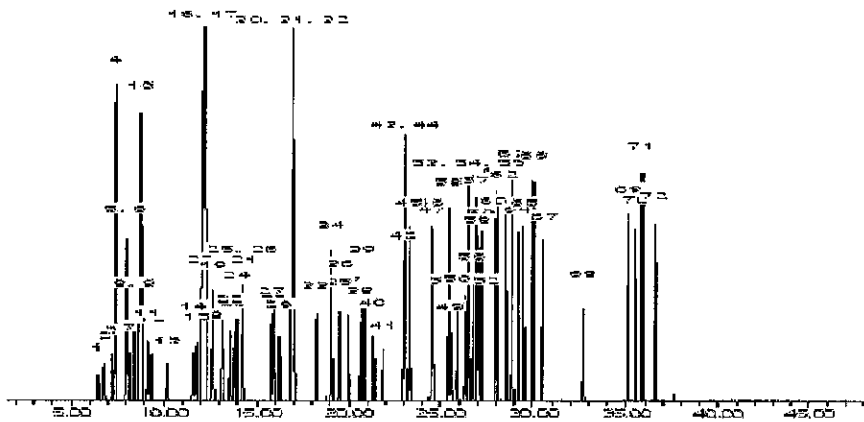
**Carrier Gas:**  
helium-constant pressure 30 psi

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

**Inj. Temp:**  
200°C

**Det. Temp:**  
250°C

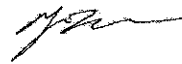
**Det. Type:**  
MSD



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.

  
Kendra Swope - Mix Technician

**Date Mixed:** 07-Jan-2015      **Balance:** 1125113331

  
Tyler Brown - QA Analyst

**Date Passed:** 14-Jan-2015

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

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**VOA8260MEGA1\_00033**





# CERTIFIED REFERENCE MATERIAL

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

## Certificate of Analysis

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### FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

**Catalog No. :** 569720 **Lot No.:** A0108166  
**Description :** 8260 List 1 / Std #1 MegaMix (2015)  
8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** January 31, 2017 **Storage:** 0°C or colder

### CERTIFIED VALUES

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

8	Methylene chloride (dichloromethane)		2,511.3	µg/mL	+/-	14.6006	µg/mL	Gravimetric
	<b>CAS #</b> 75-09-2	(Lot SHBD4974V)				+/-	133.6432	µg/mL
	<b>Purity</b> 99%					+/-	133.7906	µg/mL
9	Carbon disulfide		2,511.7	µg/mL	+/-	14.6035	µg/mL	Gravimetric
	<b>CAS #</b> 75-15-0	(Lot C30Y997)				+/-	133.6693	µg/mL
	<b>Purity</b> 98%					+/-	133.8167	µg/mL
10	Acrylonitrile		25,017.1	µg/mL	+/-	145.4441	µg/mL	Gravimetric
	<b>CAS #</b> 107-13-1	(Lot 10172706)				+/-	1,331.3554	µg/mL
	<b>Purity</b> 99%					+/-	1,332.8236	µg/mL
11	cis-1,2-Dichloroethene		2,503.9	µg/mL	+/-	14.5577	µg/mL	Gravimetric
	<b>CAS #</b> 156-59-2	(Lot MKBG8424V)				+/-	133.2507	µg/mL
	<b>Purity</b> 99%					+/-	133.3977	µg/mL
12	n-Hexane (C6)		2,511.9	µg/mL	+/-	14.6043	µg/mL	Gravimetric
	<b>CAS #</b> 110-54-3	(Lot SHBF0293V)				+/-	133.6764	µg/mL
	<b>Purity</b> 99%					+/-	133.8239	µg/mL
13	1,1-dichloroethene		2,521.3	µg/mL	+/-	14.6588	µg/mL	Gravimetric
	<b>CAS #</b> 75-35-4	(Lot SHBD6170V)				+/-	134.1754	µg/mL
	<b>Purity</b> 99%					+/-	134.3233	µg/mL
14	2,2-Dichloropropane		2,500.0	µg/mL	+/-	14.5351	µg/mL	Gravimetric
	<b>CAS #</b> 594-20-7	(Lot BCBH9246V)				+/-	133.0434	µg/mL
	<b>Purity</b> 98%					+/-	133.1901	µg/mL
15	trans-1,2-Dichloroethene		2,505.0	µg/mL	+/-	14.5643	µg/mL	Gravimetric
	<b>CAS #</b> 156-60-5	(Lot MKBH9850V)				+/-	133.3106	µg/mL
	<b>Purity</b> 99%					+/-	133.4576	µg/mL
16	Isobutanol (2-Methyl-1-propanol)		62,553.8	µg/mL	+/-	363.6739	µg/mL	Gravimetric
	<b>CAS #</b> 78-83-1	(Lot SHBF2852V)				+/-	3,328.9705	µg/mL
	<b>Purity</b> 99%					+/-	3,332.6417	µg/mL
17	Methyl-tert-butyl ether ( MTBE )		2,504.6	µg/mL	+/-	14.5621	µg/mL	Gravimetric
	<b>CAS #</b> 1634-04-4	(Lot SHBF1193V)				+/-	133.2906	µg/mL
	<b>Purity</b> 99%					+/-	133.4376	µg/mL
18	Bromochloromethane		2,505.1	µg/mL	+/-	14.5650	µg/mL	Gravimetric
	<b>CAS #</b> 74-97-5	(Lot 00004559)				+/-	133.3172	µg/mL
	<b>Purity</b> 99%					+/-	133.4642	µg/mL
19	Tetrahydrofuran		5,000.7	µg/mL	+/-	29.0746	µg/mL	Gravimetric
	<b>CAS #</b> 109-99-9	(Lot SHBF2660V)				+/-	266.1270	µg/mL
	<b>Purity</b> 97%					+/-	266.4204	µg/mL
20	1,1,1-trichloroethane		2,508.1	µg/mL	+/-	14.5825	µg/mL	Gravimetric
	<b>CAS #</b> 71-55-6	(Lot B14Z1114)				+/-	133.4769	µg/mL
	<b>Purity</b> 99%					+/-	133.6241	µg/mL
21	Cyclohexane		2,504.0	µg/mL	+/-	14.5585	µg/mL	Gravimetric
	<b>CAS #</b> 110-82-7	(Lot SHBD7873V)				+/-	133.2574	µg/mL
	<b>Purity</b> 99%					+/-	133.4043	µg/mL
22	1,1-Dichloropropene		2,502.4	µg/mL	+/-	14.5493	µg/mL	Gravimetric
	<b>CAS #</b> 563-58-6	(Lot PR09161302)				+/-	133.1738	µg/mL
	<b>Purity</b> 98%					+/-	133.3207	µg/mL
23	carbon tetrachloride		2,505.3	µg/mL	+/-	14.5657	µg/mL	Gravimetric
	<b>CAS #</b> 56-23-5	(Lot SHBC1410V)				+/-	133.3239	µg/mL
	<b>Purity</b> 99%					+/-	133.4709	µg/mL

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

40	dibromochloromethane		2,503.2	µg/mL	+/-	14.5536	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKBP0459V)			+/-	133.2129	µg/mL	Unstressed
	Purity 98%				+/-	133.3598	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,504.3	µg/mL	+/-	14.5599	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBH3877V)			+/-	133.2707	µg/mL	Unstressed
	Purity 99%				+/-	133.4176	µg/mL	Stressed
42	Chlorobenzene		2,510.8	µg/mL	+/-	14.5977	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBD3200V)			+/-	133.6166	µg/mL	Unstressed
	Purity 99%				+/-	133.7639	µg/mL	Stressed
43	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
44	Ethylbenzene		2,509.6	µg/mL	+/-	14.5912	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBC9001V)			+/-	133.5567	µg/mL	Unstressed
	Purity 99%				+/-	133.7040	µg/mL	Stressed
45	m-Xylene		1,252.6	µg/mL	+/-	7.2829	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBF1720V)			+/-	66.6619	µg/mL	Unstressed
	Purity 99%				+/-	66.7355	µg/mL	Stressed
46	o-Xylene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBC8668V)			+/-	133.2390	µg/mL	Unstressed
	Purity 98%				+/-	133.3859	µg/mL	Stressed
47	p-Xylene		1,253.3	µg/mL	+/-	7.2865	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBF3427V)			+/-	66.6952	µg/mL	Unstressed
	Purity 99%				+/-	66.7688	µg/mL	Stressed
48	Styrene		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot 10182421)			+/-	133.2307	µg/mL	Unstressed
	Purity 99%				+/-	133.3777	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10169400)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
50	bromoform		2,507.8	µg/mL	+/-	14.5803	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBC3410V)			+/-	133.4569	µg/mL	Unstressed
	Purity 99%				+/-	133.6041	µg/mL	Stressed
51	1,1,1,2-Tetrachloroethane		2,510.3	µg/mL	+/-	14.5948	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	133.5900	µg/mL	Unstressed
	Purity 99%				+/-	133.7373	µg/mL	Stressed
52	chloroform		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBB7498V)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot 1428739V)			+/-	133.1775	µg/mL	Unstressed
	Purity 99%				+/-	133.3244	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene		2,499.5	µg/mL	+/-	14.5322	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot MKBP5371V)			+/-	133.0168	µg/mL	Unstressed
	Purity 96%				+/-	133.1635	µg/mL	Stressed
55	n-Propylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBQ8049V)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed

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

72	1,2,3-Trichlorobenzene		2,503.4 µg/mL	+/- 14.5548	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/- 133.2241	µg/mL	Unstressed
	Purity 99%			+/- 133.3710	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)

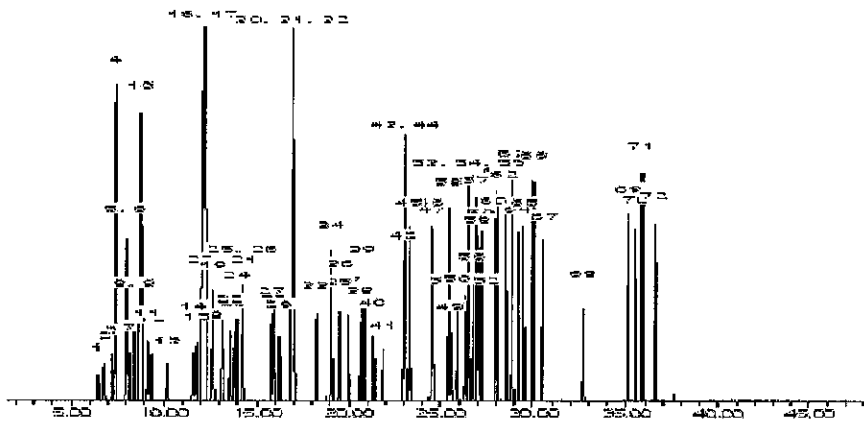
**Carrier Gas:**  
helium-constant pressure 30 psi

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

**Inj. Temp:**  
200°C

**Det. Temp:**  
250°C

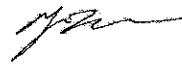
**Det. Type:**  
MSD



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.

  
Kendra Swope - Mix Technician

**Date Mixed:** 07-Jan-2015      **Balance:** 1125113331

  
Tyler Brown - QA Analyst

**Date Passed:** 14-Jan-2015

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

Reagent

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**VOA8260MEGA2\_00036**

# RESTEK<sup>®</sup> 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. :** 569720.sec **Lot No.:** A0108163  
**Description :** 8260 List 1 / Std #1 MegaMix (2015)  
8260 List 1 / Std #1 MegaMix (2015) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** January 31, 2017 **Storage:** 0°C or colder

### CERTIFIED VALUES

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



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

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

40	Dibromochloromethane		2,501.8	µg/mL	+/-	14.5454	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot I13W021)			+/-	133.1377	µg/mL	Unstressed
	Purity 97%				+/-	133.2845	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,502.1	µg/mL	+/-	14.5472	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 1368400)			+/-	133.1542	µg/mL	Unstressed
	Purity 98%				+/-	133.3011	µg/mL	Stressed
42	Chlorobenzene		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot H161936)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
43	1,1,1,2-Tetrachloroethane		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01-QSHR)			+/-	133.0844	µg/mL	Unstressed
	Purity 99%				+/-	133.2312	µg/mL	Stressed
44	Ethylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE-GR)			+/-	133.0578	µg/mL	Unstressed
	Purity 99%				+/-	133.2045	µg/mL	Stressed
45	m-Xylene		1,250.4	µg/mL	+/-	7.2698	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	66.5422	µg/mL	Unstressed
	Purity 99%				+/-	66.6156	µg/mL	Stressed
46	o-Xylene		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01-KTPK)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
47	p-Xylene		1,251.6	µg/mL	+/-	7.2771	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	66.6087	µg/mL	Unstressed
	Purity 99%				+/-	66.6822	µg/mL	Stressed
48	Styrene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/-	133.0911	µg/mL	Unstressed
	Purity 99%				+/-	133.2378	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/-	133.1110	µg/mL	Unstressed
	Purity 99%				+/-	133.2578	µg/mL	Stressed
50	Bromoform		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 1039300)			+/-	133.1243	µg/mL	Unstressed
	Purity 99%				+/-	133.2711	µg/mL	Stressed
51	1,1,2,2-Tetrachloroethane		2,502.9	µg/mL	+/-	14.5519	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	133.1975	µg/mL	Unstressed
	Purity 99%				+/-	133.3444	µg/mL	Stressed
52	Chloroform		2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	133.1310	µg/mL	Unstressed
	Purity 99%				+/-	133.2778	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,501.9	µg/mL	+/-	14.5465	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	133.1477	µg/mL	Unstressed
	Purity 98%				+/-	133.2946	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,502.7	µg/mL	+/-	14.5510	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-2)			+/-	133.1893	µg/mL	Unstressed
	Purity 97%				+/-	133.3362	µg/mL	Stressed
55	n-Propylbenzene		2,500.0	µg/mL	+/-	14.5352	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC-IT)			+/-	133.0445	µg/mL	Unstressed
	Purity 99%				+/-	133.1912	µg/mL	Stressed

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

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

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

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

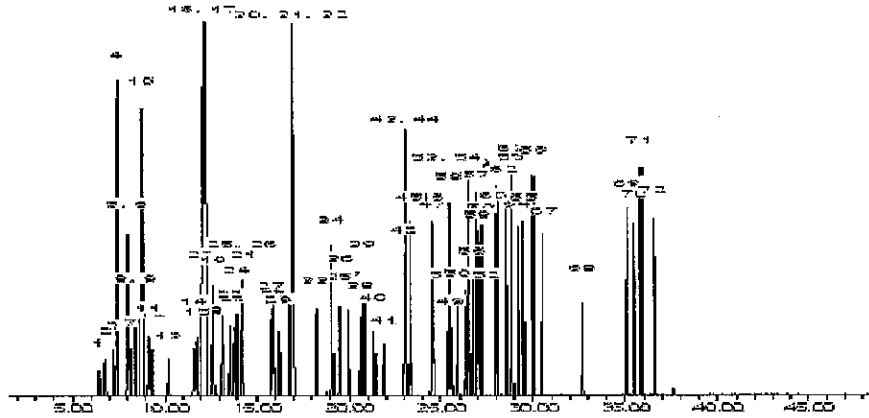
**Carrier Gas:**  
helium-constant pressure 30 psi

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

**Inj. Temp:**  
200°C

**Det. Temp:**  
250°C

**Det. Type:**  
MSD



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

*Michael Mage*

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

*Tyler Brown*

Tyler Brown - QA Analyst

**Date Passed:** 14-Jan-2015

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

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**VOA8260SURRES\_00067**



# 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.:** A0100424  
**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 :** January 31, 2019 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane CAS # 1868-53-7 Purity 99% (Lot 022012)	2,502.2 µg/mL	+/- 14.5480	µg/mL	Gravimetric
			+/- 28.2159	µg/mL	Unstressed
			+/- 32.4683	µg/mL	Stressed
2	1,2-Dichloroethane-d4 CAS # 17060-07-0 Purity 99% (Lot 12K-027)	2,501.2 µg/mL	+/- 14.5422	µg/mL	Gravimetric
			+/- 28.2046	µg/mL	Unstressed
			+/- 32.4554	µg/mL	Stressed
3	Toluene-d8 CAS # 2037-26-5 Purity 99% (Lot 13I-050)	2,500.8 µg/mL	+/- 14.5399	µg/mL	Gravimetric
			+/- 28.2001	µg/mL	Unstressed
			+/- 32.4502	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB) CAS # 460-00-4 Purity 99% (Lot 01127COV)	2,501.4 µg/mL	+/- 14.5434	µg/mL	Gravimetric
			+/- 28.2069	µg/mL	Unstressed
			+/- 32.4580	µg/mL	Stressed

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

Reagent

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**VOA8260SURRES\_00077**





# CERTIFIED REFERENCE MATERIAL

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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. :** 567650 **Lot No.:** A0101000

**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 :** January 31, 2019 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Dibromofluoromethane	2,509.6 µg/mL	+/-	14.5910	µg/mL	Gravimetric
	CAS # 1868-53-7 (Lot 022012)		+/-	28.2993	µg/mL	Unstressed
	Purity 99%		+/-	32.5644	µg/mL	Stressed
2	1,2-Dichloroethane-d4	2,508.2 µg/mL	+/-	14.5829	µg/mL	Gravimetric
	CAS # 17060-07-0 (Lot 12K-027)		+/-	28.2836	µg/mL	Unstressed
	Purity 99%		+/-	32.5462	µg/mL	Stressed
3	Toluene-d8	2,508.8 µg/mL	+/-	14.5864	µg/mL	Gravimetric
	CAS # 2037-26-5 (Lot 13I-050)		+/-	28.2903	µg/mL	Unstressed
	Purity 99%		+/-	32.5540	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,509.8 µg/mL	+/-	14.5922	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 01127COV)		+/-	28.3016	µg/mL	Unstressed
	Purity 99%		+/-	32.5670	µg/mL	Stressed

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

Reagent

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**VOA8260VARES\_00054**



# CERTIFIED REFERENCE MATERIAL

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

## Certificate of Analysis

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### 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.:** A0109190

**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 :** August 31, 2015 **Storage:** 0°C or colder

### 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%	5,023.0 µg/mL (Lot STBC8935V)	+/- 29.4778	µg/mL	Gravimetric
			+/- 267.3430	µg/mL	Unstressed
			+/- 267.6378	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\_00077**



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. : 568720 Lot No.: A0111006

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, 2015 Storage: 10°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 150115JLM)	19,748.0 µg/mL	+/-	115.8923	µg/mL	Gravimetric
			+/-	633.2311	µg/mL	Unstressed
			+/-	736.0474	µg/mL	Stressed

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

Reagent

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**VOARESEE1ST\_00021**



# CERTIFIED REFERENCE MATERIAL



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

## Certificate of Analysis



www.restek.com

### 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.: A0109701  
 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 : September 30, 2016 Storage: 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
			µg/mL	µg/mL	Gravimetric
1	3-Chlorobenzotrifluoride	5,000.0 µg/mL	+/- 29.3428	µg/mL	Gravimetric
	CAS # 98-15-7 (Lot 21324DO)		+/- 56.5231	µg/mL	Unstressed
	Purity 99%		+/- 65.0021	µg/mL	Stressed
2	4-Chlorobenzotrifluoride	5,003.0 µg/mL	+/- 29.3604	µg/mL	Gravimetric
	CAS # 98-56-6 (Lot 08507BO)		+/- 56.5570	µg/mL	Unstressed
	Purity 99%		+/- 65.0411	µg/mL	Stressed
3	2-Chlorobenzotrifluoride	5,009.0 µg/mL	+/- 29.3956	µg/mL	Gravimetric
	CAS # 88-16-4 (Lot I0316DQ)		+/- 56.6248	µg/mL	Unstressed
	Purity 99%		+/- 65.1191	µg/mL	Stressed
4	3-Chlorotoluene	5,012.0 µg/mL	+/- 29.4132	µg/mL	Gravimetric
	CAS # 108-41-8 (Lot 13528LX)		+/- 56.6587	µg/mL	Unstressed
	Purity 99%		+/- 65.1581	µg/mL	Stressed
5	2,4-Dichlorobenzotrifluoride	5,013.0 µg/mL	+/- 29.4191	µg/mL	Gravimetric
	CAS # 320-60-5 (Lot MKBL3552V)		+/- 56.6701	µg/mL	Unstressed
	Purity 99%		+/- 65.1711	µg/mL	Stressed
6	3,4-Dichlorobenzotrifluoride	5,018.0 µg/mL	+/- 29.4484	µg/mL	Gravimetric
	CAS # 328-84-7 (Lot 11105EJV)		+/- 56.7266	µg/mL	Unstressed
	Purity 99%		+/- 65.2361	µg/mL	Stressed
7	2,5-Dichlorobenzotrifluoride	5,015.0 µg/mL	+/- 29.4308	µg/mL	Gravimetric
	CAS # 320-50-3 (Lot 04415DSV)		+/- 56.6927	µg/mL	Unstressed
	Purity 99%		+/- 65.1971	µg/mL	Stressed

8	2,4-Dichlorotoluene CAS # 95-73-8 Purity 99%	(Lot 07715JS)	5,021.0 µg/mL	+/- 29.4660 +/- 56.7605 +/- 65.2751	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	2,5-Dichlorotoluene CAS # 19398-61-9 Purity 99%	(Lot 1381346V)	5,005.0 µg/mL	+/- 29.3721 +/- 56.5796 +/- 65.0671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2,6-Dichlorotoluene CAS # 118-69-4 Purity 99%	(Lot 16921JS)	5,014.0 µg/mL	+/- 29.4250 +/- 56.6814 +/- 65.1841	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	3,4-Dichlorotoluene CAS # 95-75-0 Purity 99%	(Lot 09419AS)	5,011.0 µg/mL	+/- 29.4074 +/- 56.6474 +/- 65.1451	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	2,3-Dichlorotoluene CAS # 32768-54-0 Purity 99%	(Lot 00317)	5,016.0 µg/mL	+/- 29.4367 +/- 56.7040 +/- 65.2101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,4,5-Trichlorotoluene CAS # 6639-30-1 Purity 99%	(Lot 2490300)	5,000.0 µg/mL	+/- 29.3428 +/- 56.5231 +/- 65.0021	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,3,6-Trichlorotoluene CAS # 2077-46-5 Purity 99%	(Lot NT050444)	5,005.0 µg/mL	+/- 29.3721 +/- 56.5796 +/- 65.0671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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



Reagent

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**WCr1000S\_00003**



1522764  
 ID: WCr1000S\_00003  
 Exp: 01/08/17 Prep: NAK Opn: 04/03/15  
 1000ppm Cr+6

**CERTIFICATE OF ANALYSIS**

Description: CHROMIUM AA STANDARD, 1000ppm (1mL = 1mg Cr)

Mfg. Date: 01/08/2015

Catalog Number: LC13120

Exp. Date: 01/08/2017

Lot Number: E007-10

**ANALYTICAL SECTION**

Test	Specification	Test Result
Appearance	clear, orange solution	Pass Test
Concentration ppm Cr	1000ppm +/- 5ppm	1002 ppm
Concentration mg Cr/mL	1.000 +/- 0.005 mg Cr/mL	1.002 mg Cr/mL
Traceable to NIST	Potassium Dichromate	136f

Submitted by: Greg Albright, Chemist Supervisor

An ISO9001:2008 certified company. Registration # 0306-01

04/03/2015 2:12 PM

# 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.: 180-48019-1

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-47-0/1-0	180-48019-1	104	94	94	90
HD-MW-49D-0/1-0	180-48019-2	106	96	93	87
HD-MW-12-0/1-0	180-48019-3	106	97	97	90
HD-MW-12-0/1-0 DL	180-48019-3 DL	107	99	93	91
HD-MW-9-0/1-0	180-48019-4	108	95	95	87
HD-QC6-0/1-2	180-48019-5	109	99	97	91
HD-QC2-0/1-3	180-48019-6	109	99	93	89
HD-QC2-0/1-4	180-48019-7	106	97	93	89
	MB 180-155398/4	107	96	95	90
	MB 180-155577/7	99	97	95	88
	LCS 180-155398/10	92	87	100	98
	LCS 180-155577/12	88	80	90	94

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

QC LIMITS  
70-128  
64-135  
71-118  
70-118

# Column to be used to flag recovery values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Matrix: Water Level: Low

Lab File ID: 50930010.D

Lab ID: LCS 180-155398/10

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

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	10.7	107	50-139	
Vinyl chloride	10.0	10.2	102	53-138	
Bromomethane	10.0	11.5	115	33-150	
Chloroethane	10.0	9.51	95	36-142	
1,1-Dichloroethene	10.0	9.59	96	65-136	
Acetone	20.0	18.2	91	22-150	
Carbon disulfide	10.0	9.79	98	54-132	
Methylene Chloride	10.0	9.44	94	63-129	
trans-1,2-Dichloroethene	10.0	9.45	94	73-126	
Methyl tert-butyl ether	10.0	9.50	95	64-123	
1,1-Dichloroethane	10.0	9.38	94	73-126	
cis-1,2-Dichloroethene	10.0	9.34	93	70-120	
Bromochloromethane	10.0	10.4	104	70-127	
2-Butanone (MEK)	20.0	19.1	95	39-138	
Chloroform	10.0	9.14	91	72-127	
1,1,1-Trichloroethane	10.0	9.41	94	63-133	
Carbon tetrachloride	10.0	9.69	97	55-150	
Benzene	10.0	9.48	95	80-120	
1,2-Dichloroethane	10.0	8.81	88	68-132	
Trichloroethene	10.0	10.2	102	73-120	
1,2-Dichloropropane	10.0	9.37	94	76-124	
Bromodichloromethane	10.0	9.52	95	66-130	
cis-1,3-Dichloropropene	10.0	8.85	88	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.9	90	45-145	
Toluene	10.0	10.4	104	80-123	
trans-1,3-Dichloropropene	10.0	9.72	97	65-125	
1,1,2-Trichloroethane	10.0	10.1	101	77-127	
Tetrachloroethene	10.0	11.4	114	70-135	
2-Hexanone	20.0	17.7	88	25-132	
Dibromochloromethane	10.0	10.2	102	60-140	
1,2-Dibromoethane (EDB)	10.0	10.4	104	74-123	
Chlorobenzene	10.0	10.6	106	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.5	105	63-140	
Ethylbenzene	10.0	10.8	108	72-126	
Xylenes, Total	20.0	22.1	111	76-128	
Styrene	10.0	11.2	112	71-127	
Bromoform	10.0	9.76	98	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.4	104	62-125	
Acrylonitrile	100	96.8	97	30-140	
1,4-Dioxane	200	204	102	10-160	

# 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.: 180-48019-1

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

Matrix: Water Level: Low

Lab File ID: 51001012.D

Lab ID: LCS 180-155577/12

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

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	9.95	99	50-139	
Vinyl chloride	10.0	9.09	91	53-138	
Bromomethane	10.0	10.4	104	33-150	
Chloroethane	10.0	8.45	84	36-142	
1,1-Dichloroethene	10.0	8.69	87	65-136	
Acetone	20.0	20.3	102	22-150	
Carbon disulfide	10.0	8.46	85	54-132	
Methylene Chloride	10.0	8.97	90	63-129	
trans-1,2-Dichloroethene	10.0	8.94	89	73-126	
Methyl tert-butyl ether	10.0	9.18	92	64-123	
1,1-Dichloroethane	10.0	8.89	89	73-126	
cis-1,2-Dichloroethene	10.0	9.08	91	70-120	
Bromochloromethane	10.0	9.66	97	70-127	
2-Butanone (MEK)	20.0	21.1	106	39-138	
Chloroform	10.0	8.67	87	72-127	
1,1,1-Trichloroethane	10.0	8.93	89	63-133	
Carbon tetrachloride	10.0	8.79	88	55-150	
Benzene	10.0	9.16	92	80-120	
1,2-Dichloroethane	10.0	8.78	88	68-132	
Trichloroethene	10.0	9.54	95	73-120	
1,2-Dichloropropane	10.0	8.97	90	76-124	
Bromodichloromethane	10.0	8.71	87	66-130	
cis-1,3-Dichloropropene	10.0	8.11	81	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	18.9	95	45-145	
Toluene	10.0	9.90	99	80-123	
trans-1,3-Dichloropropene	10.0	8.57	86	65-125	
1,1,2-Trichloroethane	10.0	9.66	97	77-127	
Tetrachloroethene	10.0	10.1	101	70-135	
2-Hexanone	20.0	18.2	91	25-132	
Dibromochloromethane	10.0	9.29	93	60-140	
1,2-Dibromoethane (EDB)	10.0	9.76	98	74-123	
Chlorobenzene	10.0	9.88	99	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.79	98	63-140	
Ethylbenzene	10.0	10.1	101	72-126	
Xylenes, Total	20.0	20.2	101	76-128	
Styrene	10.0	10.4	104	71-127	
Bromoform	10.0	8.66	87	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	62-125	
Acrylonitrile	100	97.7	98	30-140	
1,4-Dioxane	200	247	123	10-160	

# Column to be used to flag recovery and RPD values

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50930004.D Lab Sample ID: MB 180-155398/4  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: CHHP5 Date Analyzed: 09/30/2015 12:23  
 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 180-155398/10	50930010.D	09/30/2015 15:03
HD-MW-47-0/1-0	180-48019-1	50930013.D	09/30/2015 16:15
HD-QC6-0/1-2	180-48019-5	50930014.D	09/30/2015 16:39
HD-MW-49D-0/1-0	180-48019-2	50930015.D	09/30/2015 17:03
HD-MW-12-0/1-0	180-48019-3	50930016.D	09/30/2015 17:27
HD-QC2-0/1-4	180-48019-7	50930020.D	09/30/2015 19:04
HD-QC2-0/1-3	180-48019-6	50930021.D	09/30/2015 19:28

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 51001007.D Lab Sample ID: MB 180-155577/7  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: CHHP5 Date Analyzed: 10/01/2015 14:45  
 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 180-155577/12	51001012.D	10/01/2015 16:59
HD-MW-12-0/1-0 DL	180-48019-3 DL	51001015.D	10/01/2015 18:12
HD-MW-9-0/1-0	180-48019-4	51001016.D	10/01/2015 18:36



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50826007.D BFB Injection Date: 08/26/2015  
 Instrument ID: CHHP5 BFB Injection Time: 14:01  
 Analysis Batch No.: 151868

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	23.5
75	30.0 - 60.0 % of mass 95	49.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.6
173	Less than 2.0 % of mass 174	0.4 (0.5)1
174	50.0 - 120.00 % of mass 95	77.9
175	5.0 - 9.0 % of mass 174	6.1 (7.9)1
176	95.0 - 101.0 % of mass 174	75.2 (96.6)1
177	5.0 - 9.0 % of mass 176	4.9 (6.6)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 180-151868/6	50826006.D	08/26/2015	15:04
	IC 180-151868/8	50826008.D	08/26/2015	15:28
	ICIS 180-151868/9	50826009.D	08/26/2015	15:52
	IC 180-151868/10	50826010.D	08/26/2015	16:16
	IC 180-151868/11	50826011.D	08/26/2015	16:40
	IC 180-151868/12	50826012.D	08/26/2015	17:04
	IC 180-151868/13	50826013.D	08/26/2015	17:28
	IC 180-151868/14	50826014.D	08/26/2015	17:52

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50930001.D BFB Injection Date: 09/30/2015  
 Instrument ID: CHHP5 BFB Injection Time: 10:35  
 Analysis Batch No.: 155398

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	23.3
75	30.0 - 60.0 % of mass 95	46.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.6
173	Less than 2.0 % of mass 174	0.5 (0.5)1
174	50.0 - 120.00 % of mass 95	86.0
175	5.0 - 9.0 % of mass 174	7.1 (8.2)1
176	95.0 - 101.0 % of mass 174	83.1 (96.6)1
177	5.0 - 9.0 % of mass 176	5.5 (6.6)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 180-155398/2	50930002.D	09/30/2015	11:16
	MB 180-155398/4	50930004.D	09/30/2015	12:23
	LCS 180-155398/10	50930010.D	09/30/2015	15:03
HD-MW-47-0/1-0	180-48019-1	50930013.D	09/30/2015	16:15
HD-QC6-0/1-2	180-48019-5	50930014.D	09/30/2015	16:39
HD-MW-49D-0/1-0	180-48019-2	50930015.D	09/30/2015	17:03
HD-MW-12-0/1-0	180-48019-3	50930016.D	09/30/2015	17:27
HD-QC2-0/1-4	180-48019-7	50930020.D	09/30/2015	19:04
HD-QC2-0/1-3	180-48019-6	50930021.D	09/30/2015	19:28

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 51001006.D BFB Injection Date: 10/01/2015  
 Instrument ID: CHHP5 BFB Injection Time: 13:11  
 Analysis Batch No.: 155577

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	47.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.2
173	Less than 2.0 % of mass 174	0.2 (0.2)1
174	50.0 - 120.00 % of mass 95	86.0
175	5.0 - 9.0 % of mass 174	6.2 (7.2)1
176	95.0 - 101.0 % of mass 174	82.5 (96.0)1
177	5.0 - 9.0 % of mass 176	5.5 (6.7)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 180-155577/2	51001002.D	10/01/2015	13:46
	MB 180-155577/7	51001007.D	10/01/2015	14:45
	LCS 180-155577/12	51001012.D	10/01/2015	16:59
HD-MW-12-0/1-0 DL	180-48019-3 DL	51001015.D	10/01/2015	18:12
HD-MW-9-0/1-0	180-48019-4	51001016.D	10/01/2015	18:36

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-155398/2 Date Analyzed: 09/30/2015 11:16  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 50930002.D Heated Purge: (Y/N) N  
 Calibration ID: 25113

	TBA		FB		CBZ		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	104384	4.27	332995	7.29	79470	10.39	
UPPER LIMIT	208768	4.77	665990	7.79	158940	10.89	
LOWER LIMIT	52192	3.77	166498	6.79	39735	9.89	
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-155398/4		119766	4.26	324230	7.29	80509	10.39
LCS 180-155398/10		112117	4.28	351860	7.29	83209	10.39
180-48019-1	HD-MW-47-0/1-0	113906	4.26	318678	7.30	78348	10.39
180-48019-5	HD-QC6-0/1-2	122069	4.26	302991	7.29	77326	10.39
180-48019-2	HD-MW-49D-0/1-0	112927	4.26	313893	7.29	80476	10.39
180-48019-3	HD-MW-12-0/1-0	111918	4.27	306669	7.29	78032	10.39
180-48019-7	HD-QC2-0/1-4	112410	4.27	313314	7.29	78248	10.39
180-48019-6	HD-QC2-0/1-3	107639	4.26	305290	7.29	76688	10.39

TBA = TBA-d9 (IS)

FB = Fluorobenzene (IS)

CBZ = 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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-155398/2 Date Analyzed: 09/30/2015 11:16  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 50930002.D Heated Purge: (Y/N) N  
 Calibration ID: 25113

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		122333	12.73				
UPPER LIMIT		244666	13.23				
LOWER LIMIT		61167	12.23				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-155398/4		120814	12.73				
LCS 180-155398/10		130371	12.73				
180-48019-1	HD-MW-47-0/1-0	111449	12.73				
180-48019-5	HD-QC6-0/1-2	114556	12.73				
180-48019-2	HD-MW-49D-0/1-0	116063	12.73				
180-48019-3	HD-MW-12-0/1-0	112525	12.73				
180-48019-7	HD-QC2-0/1-4	114446	12.73				
180-48019-6	HD-QC2-0/1-3	110311	12.73				

DCB = 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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-155577/2 Date Analyzed: 10/01/2015 13:46  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 51001002.D Heated Purge: (Y/N) N  
 Calibration ID: 25113

	TBA		FB		CBZ		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	102757	4.28	357732	7.29	84581	10.39	
UPPER LIMIT	205514	4.78	715464	7.79	169162	10.89	
LOWER LIMIT	51379	3.78	178866	6.79	42291	9.89	
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-155577/7		120179	4.27	325318	7.29	84064	10.39
LCS 180-155577/12		125325	4.28	367204	7.29	87820	10.39
180-48019-3 DL	HD-MW-12-0/1-0 DL	93267	4.26	295614	7.29	74571	10.39
180-48019-4	HD-MW-9-0/1-0	119916	4.27	300527	7.29	73960	10.39

TBA = TBA-d9 (IS)

FB = Fluorobenzene (IS)

CBZ = 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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-155577/2 Date Analyzed: 10/01/2015 13:46  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 51001002.D Heated Purge: (Y/N) N  
 Calibration ID: 25113

	DCB		AREA #	RT #	AREA #	RT #
	AREA #	RT #				
12/24 HOUR STD	134719	12.73				
UPPER LIMIT	269438	13.23				
LOWER LIMIT	67360	12.23				
LAB SAMPLE ID	CLIENT SAMPLE ID					
MB 180-155577/7		117882	12.73			
LCS 180-155577/12		136912	12.73			
180-48019-3 DL	HD-MW-12-0/1-0 DL	111745	12.73			
180-48019-4	HD-MW-9-0/1-0	107861	12.73			

DCB = 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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-47-0/1-0 Lab Sample ID: 180-48019-1  
 Matrix: Water Lab File ID: 50930013.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 10:22  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 16:15  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	0.50	J	1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	5.8		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	4.5		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	3.6		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-47-0/1-0 Lab Sample ID: 180-48019-1  
 Matrix: Water Lab File ID: 50930013.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 10:22  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 16:15  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		64-135
2037-26-5	Toluene-d8 (Surr)	94		71-118
460-00-4	4-Bromofluorobenzene (Surr)	90		70-118
1868-53-7	Dibromofluoromethane (Surr)	104		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930013.D  
 Lims ID: 180-48019-D-1 Lab Sample ID: 180-48019-1  
 Client ID: HD-MW-47-0/1-0  
 Sample Type: Client  
 Inject. Date: 30-Sep-2015 16:15:30 ALS Bottle#: 13 Worklist Smp#: 13  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-48019-D-1  
 Misc. Info.: 180-0008759-013  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 08:42:39 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 08:42:39

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.260	4.273	-0.013	0	113906	1000.0	
* 2 Fluorobenzene (IS)	96	7.295	7.290	0.005	98	318678	50.0	
* 3 Chlorobenzene-d5	119	10.392	10.387	0.005	87	78348	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.729	-0.001	96	111449	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.565	6.560	0.005	94	81595	52.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.932	0.004	0	101047	47.0	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.933	0.005	94	282863	46.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.573	-0.001	89	102881	45.1	
12 Chloromethane	50		1.773				ND	
13 Vinyl chloride	62	1.917	1.907	0.010	1	1146	0.4887	
15 Bromomethane	94		2.241				ND	
16 Chloroethane	64		2.393				ND	
22 1,1-Dichloroethene	96	3.347	3.342	0.005	58	4459	2.51	
24 Acetone	43		3.446				ND	
26 Carbon disulfide	76		3.628				ND	
31 Methylene Chloride	84		4.139				ND	
33 Acrylonitrile	53		4.522				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.577				ND	
37 1,1-Dichloroethane	63		5.198				ND	
45 cis-1,2-Dichloroethene	96	5.951	5.946	0.005	83	59345	28.8	
46 2-Butanone (MEK)	43		5.958				ND	
49 Chlorobromomethane	128		6.232				ND	
52 Chloroform	83		6.384				ND	
53 1,1,1-Trichloroethane	97	6.553	6.536	0.017	35	3138	1.29	
56 Carbon tetrachloride	117		6.713				ND	
58 Benzene	78		6.944				ND	
59 1,2-Dichloroethane	62		7.023				ND	
64 Trichloroethene	130	7.678	7.674	0.004	94	42903	22.3	
67 1,2-Dichloropropane	63		7.947				ND	
70 1,4-Dioxane	88		8.027				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.227				ND	
74 cis-1,3-Dichloropropene	75		8.671				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.830				ND	
76 Toluene	91		9.000				ND	
77 trans-1,3-Dichloropropene	75		9.249				ND	
79 1,1,2-Trichloroethane	97		9.450				ND	
80 Tetrachloroethene	164	9.516	9.517	-0.001	97	27165	18.0	
82 2-Hexanone	43		9.657				ND	
84 Chlorodibromomethane	129		9.815				ND	
85 Ethylene Dibromide	107		9.931				ND	
87 Chlorobenzene	112		10.417				ND	
89 1,1,1,2-Tetrachloroethane	131		10.509				ND	
90 Ethylbenzene	106		10.515				ND	
91 m-Xylene & p-Xylene	106		10.649				ND	
92 o-Xylene	106		11.026				ND	
93 Styrene	104		11.044				ND	
94 Bromoform	173		11.233				ND	
99 1,1,2,2-Tetrachloroethane	83		11.707				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930013.D

Injection Date: 30-Sep-2015 16:15:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-D-1

Lab Sample ID: 180-48019-1

Worklist Smp#: 13

Client ID: HD-MW-47-0/1-0

Purge Vol: 5.000 mL

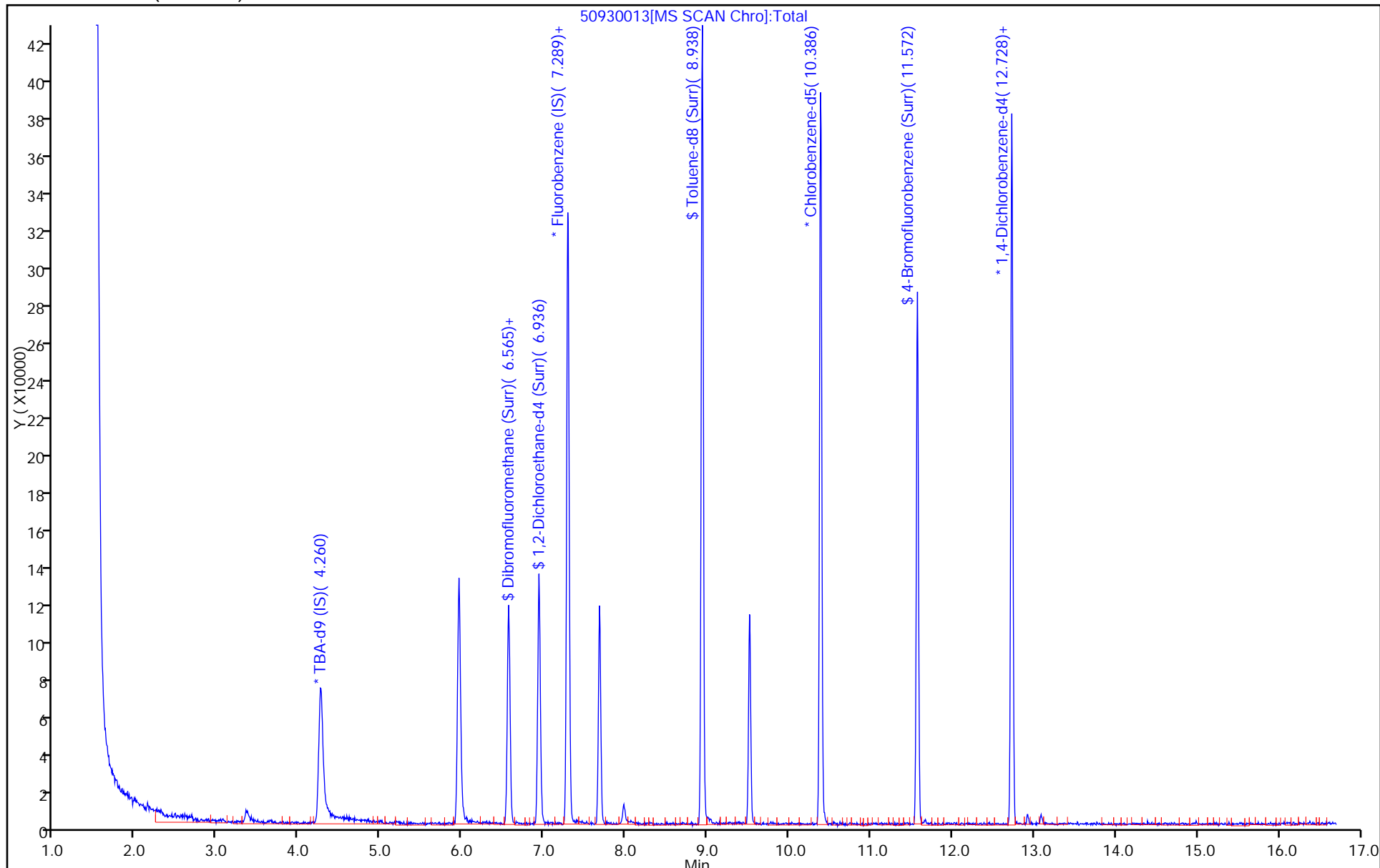
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930013.D

Injection Date: 30-Sep-2015 16:15:30

Instrument ID: CHHP5

Lims ID: 180-48019-D-1

Lab Sample ID: 180-48019-1

Client ID: HD-MW-47-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

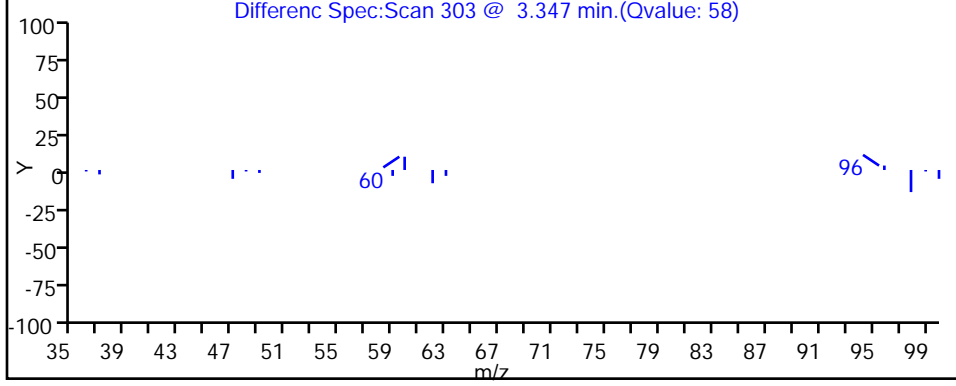
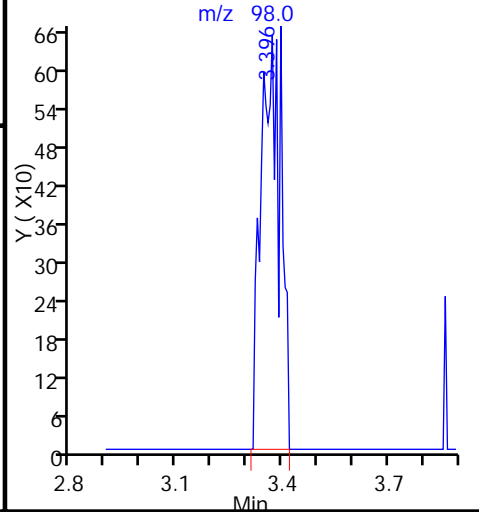
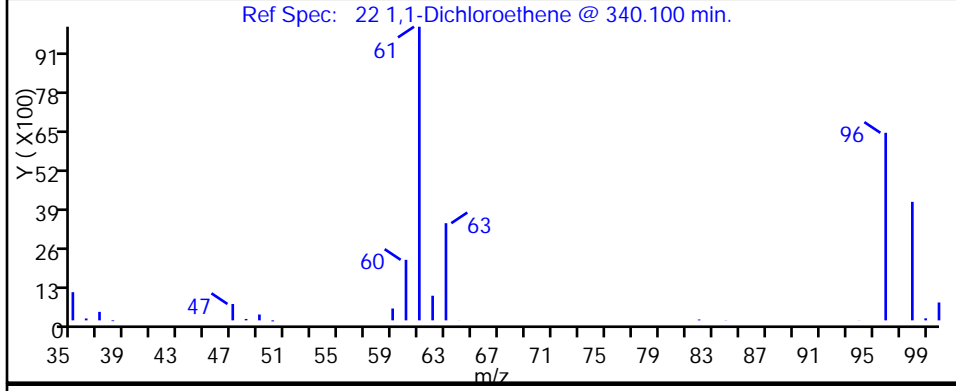
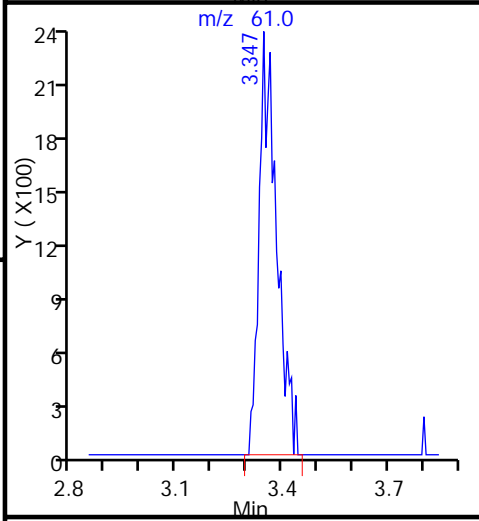
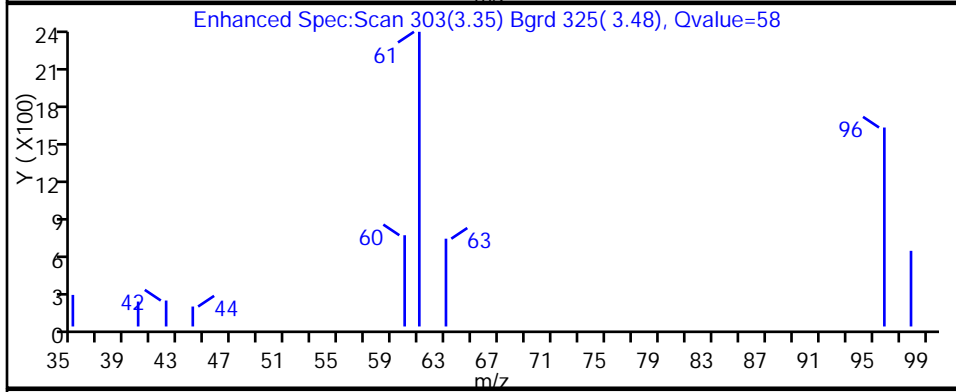
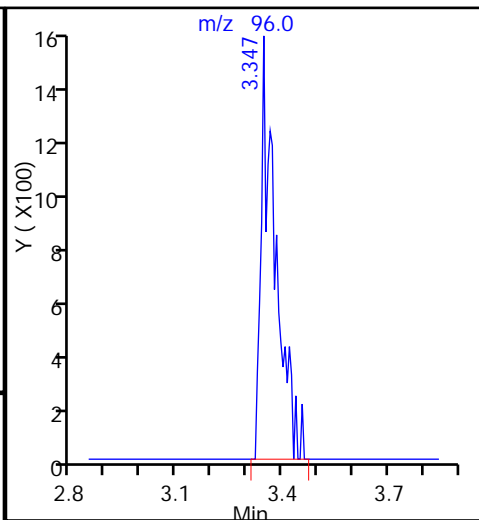
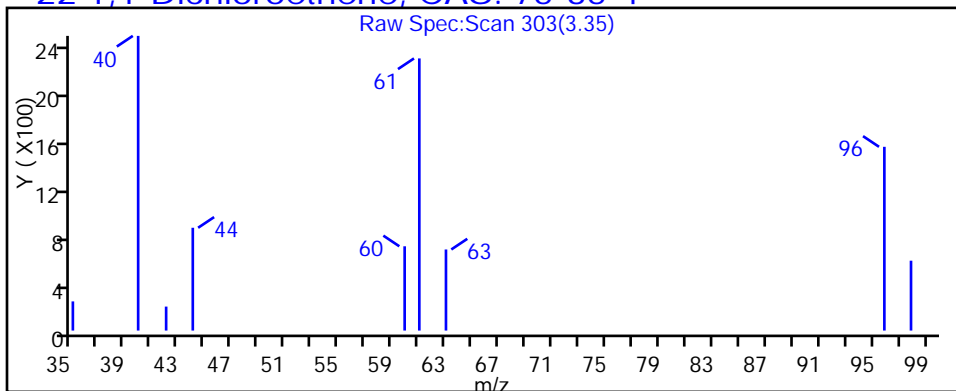
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

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



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930013.D

Injection Date: 30-Sep-2015 16:15:30

Instrument ID: CHHP5

Lims ID: 180-48019-D-1

Lab Sample ID: 180-48019-1

Client ID: HD-MW-47-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

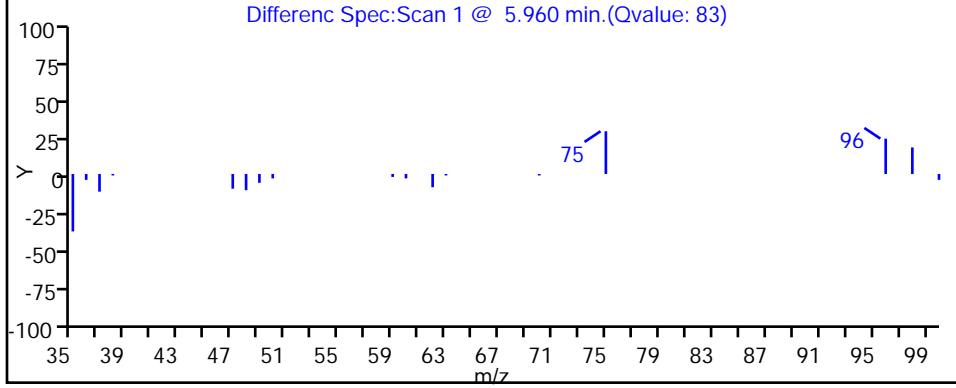
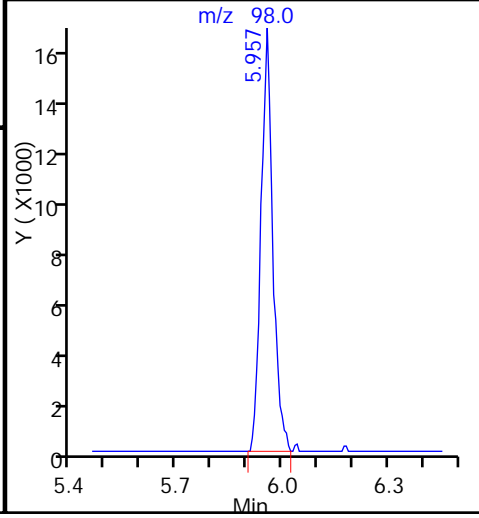
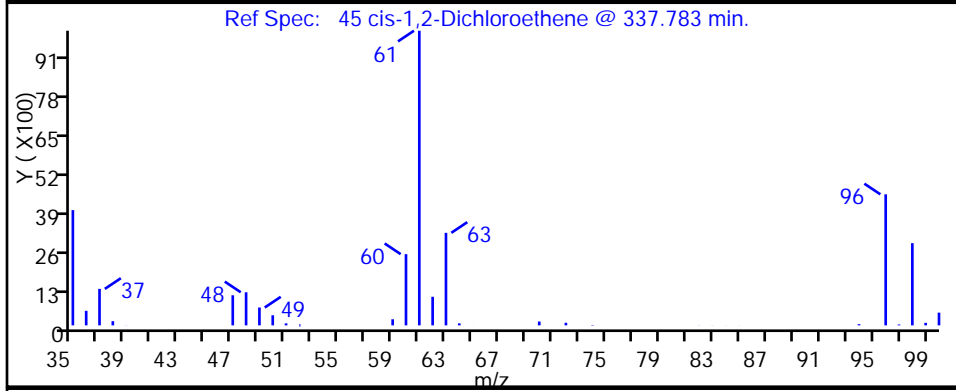
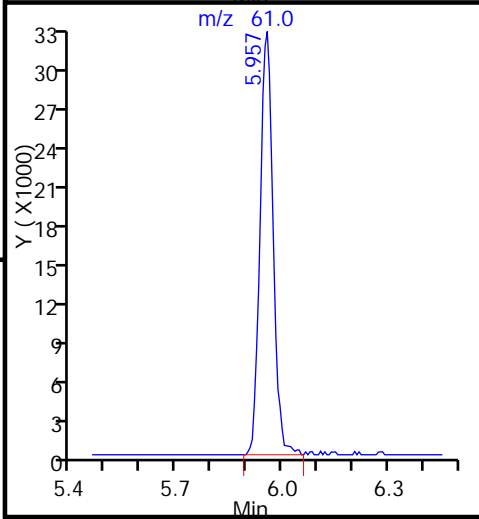
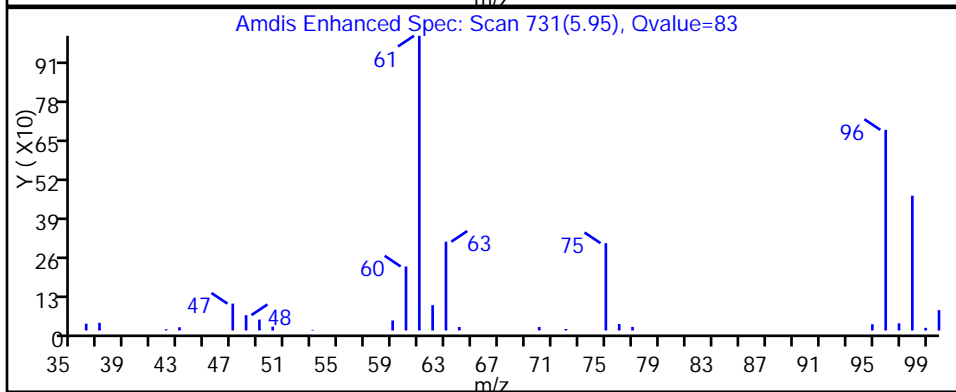
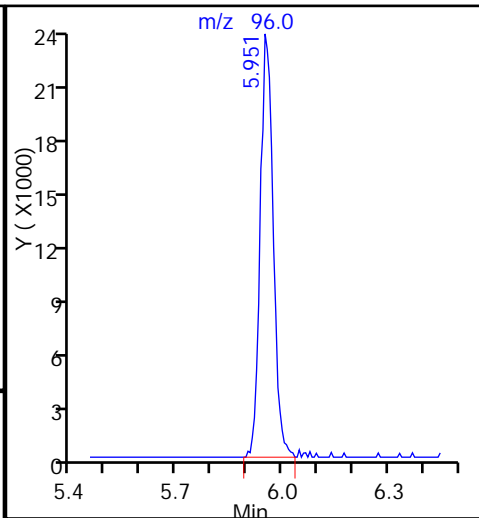
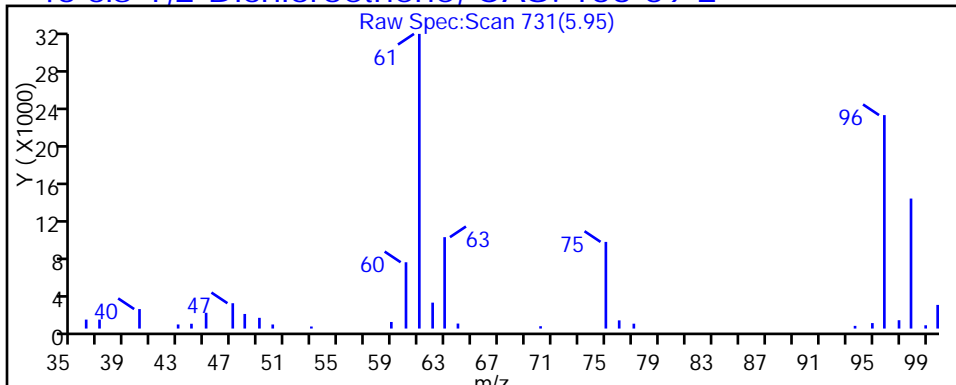
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

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



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930013.D

Injection Date: 30-Sep-2015 16:15:30

Instrument ID: CHHP5

Lims ID: 180-48019-D-1

Lab Sample ID: 180-48019-1

Client ID: HD-MW-47-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

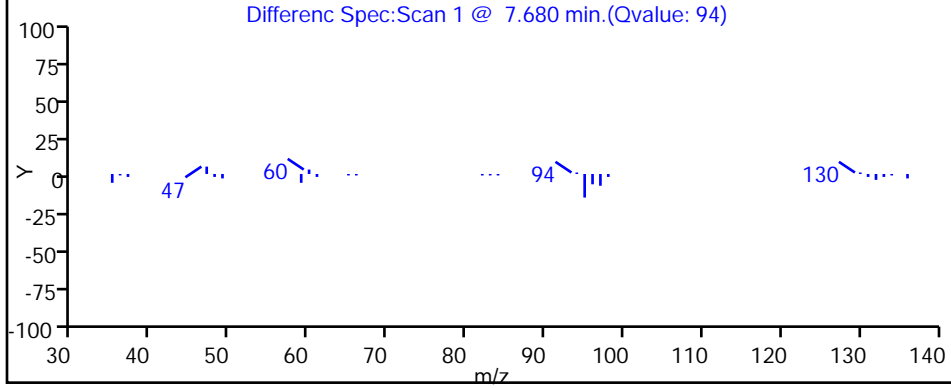
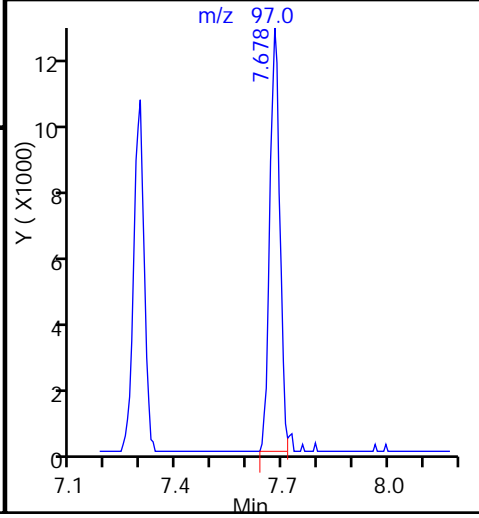
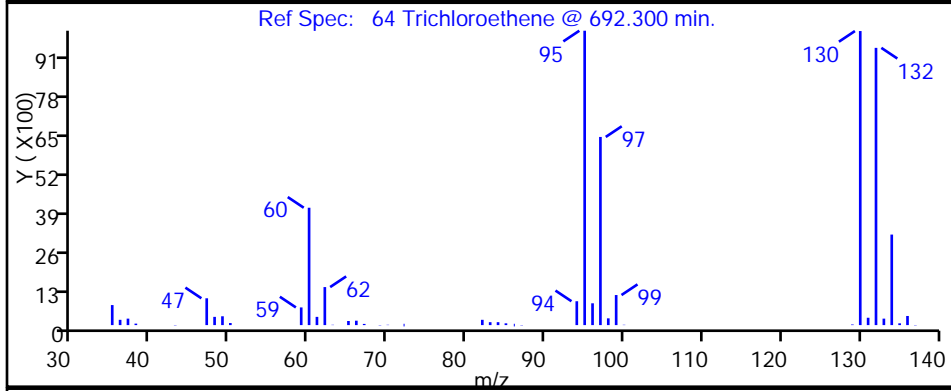
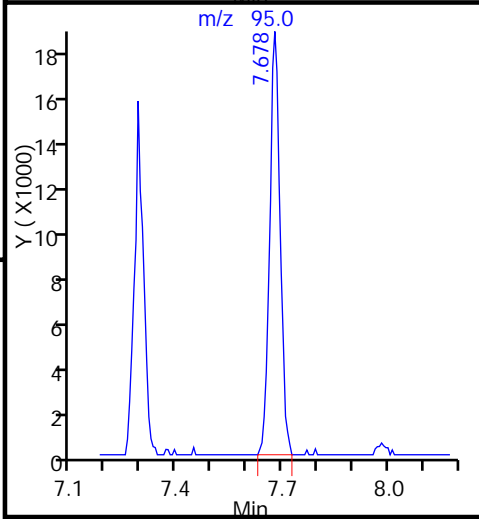
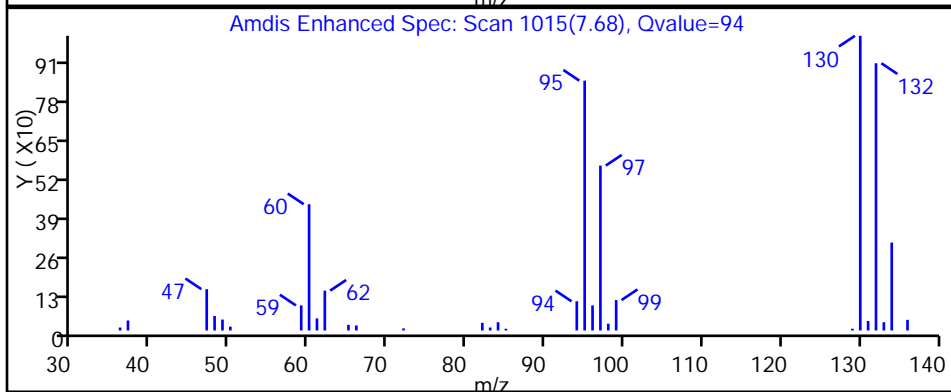
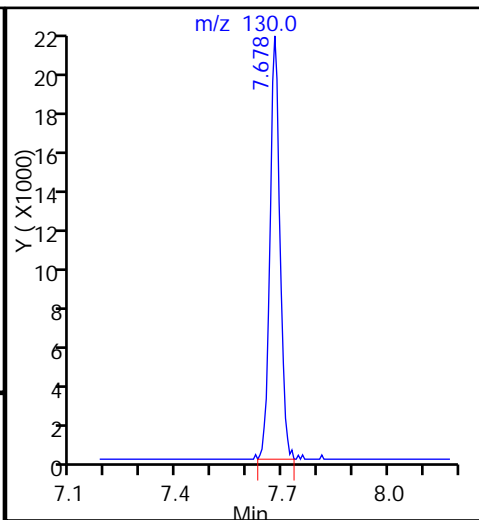
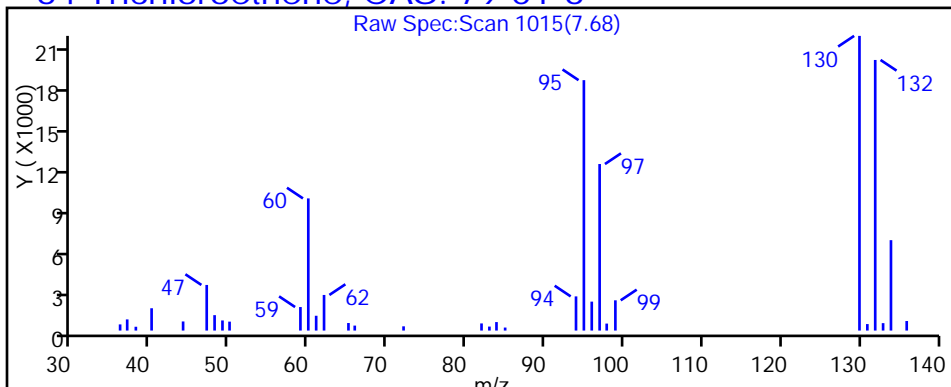
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930013.D

Injection Date: 30-Sep-2015 16:15:30

Instrument ID: CHHP5

Lims ID: 180-48019-D-1

Lab Sample ID: 180-48019-1

Client ID: HD-MW-47-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

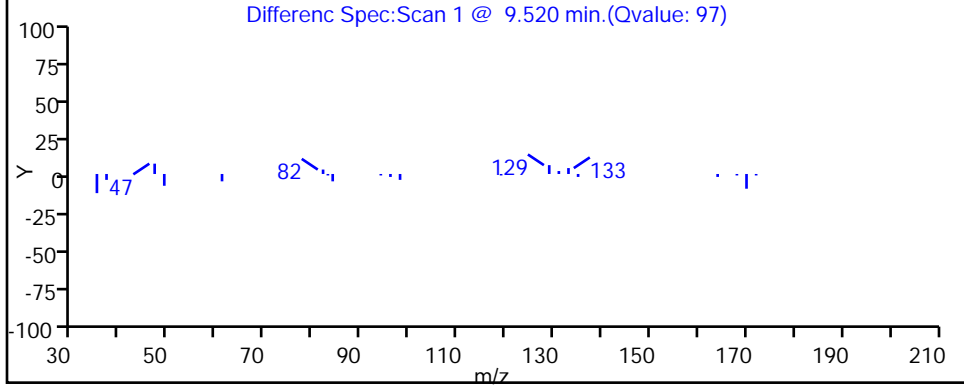
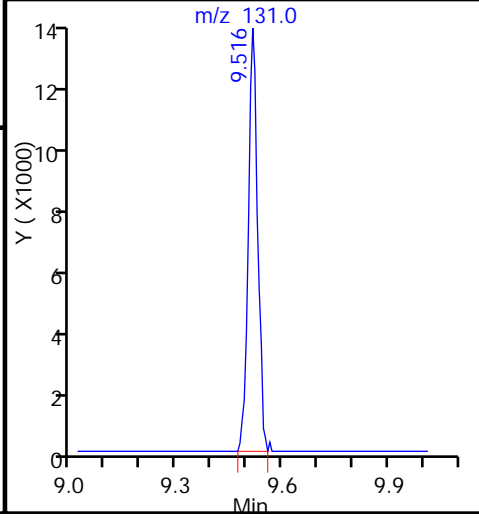
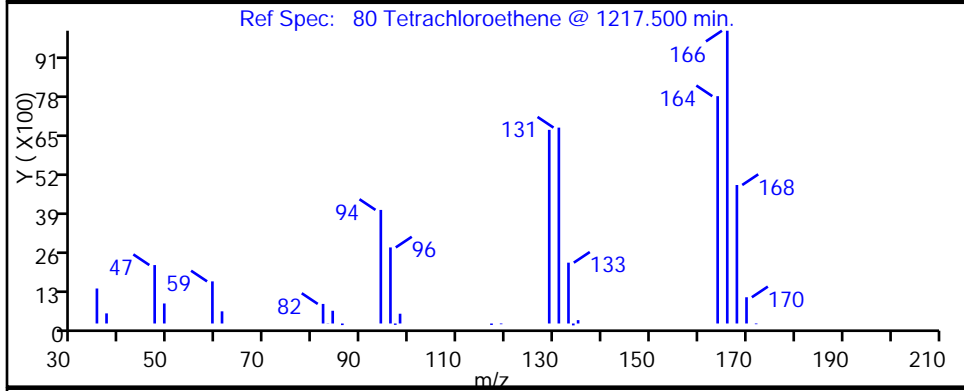
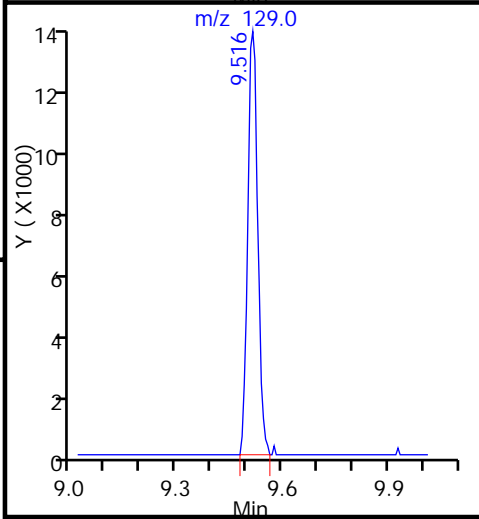
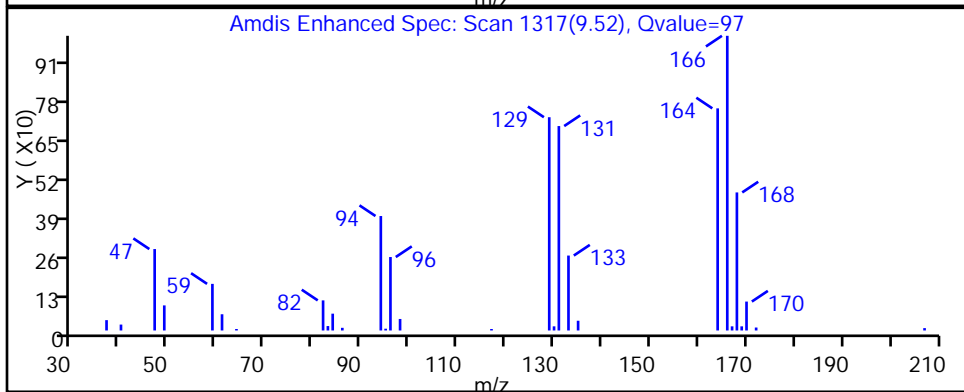
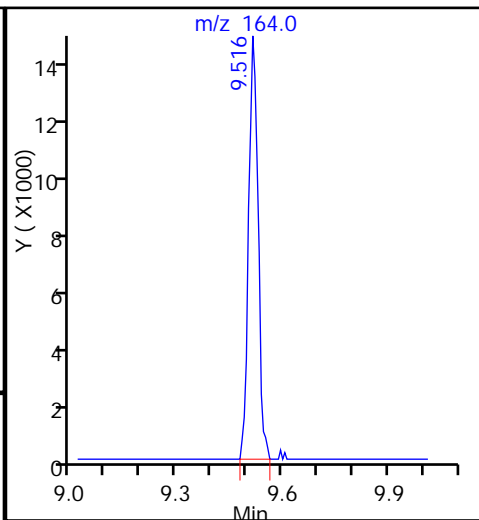
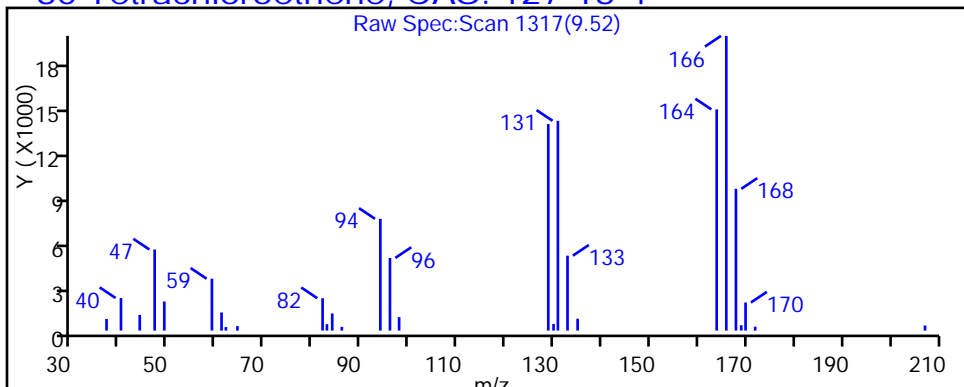
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4





FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-49D-0/1-0 Lab Sample ID: 180-48019-2  
 Matrix: Water Lab File ID: 50930015.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 12:57  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 17:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 200  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		200	57
75-01-4	Vinyl chloride	ND		200	45
74-83-9	Bromomethane	ND		200	63
75-00-3	Chloroethane	ND		200	43
75-35-4	1,1-Dichloroethene	190	J	200	59
67-64-1	Acetone	ND		1000	500
75-15-0	Carbon disulfide	ND		200	42
75-09-2	Methylene Chloride	ND		200	25
156-60-5	trans-1,2-Dichloroethene	ND		200	34
1634-04-4	Methyl tert-butyl ether	ND		200	37
75-34-3	1,1-Dichloroethane	520		200	23
156-59-2	cis-1,2-Dichloroethene	3400		200	47
74-97-5	Bromochloromethane	ND		200	36
78-93-3	2-Butanone (MEK)	ND	^c	1000	110
67-66-3	Chloroform	ND		200	34
71-55-6	1,1,1-Trichloroethane	1900		200	57
56-23-5	Carbon tetrachloride	ND		200	27
71-43-2	Benzene	ND		200	21
107-06-2	1,2-Dichloroethane	ND		200	42
79-01-6	Trichloroethene	3300		200	29
78-87-5	1,2-Dichloropropane	ND		200	19
75-27-4	Bromodichloromethane	ND		200	26
10061-01-5	cis-1,3-Dichloropropene	ND		200	37
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	1000	110
108-88-3	Toluene	ND		200	30
10061-02-6	trans-1,3-Dichloropropene	ND		200	30
79-00-5	1,1,2-Trichloroethane	ND		200	40
127-18-4	Tetrachloroethene	480		200	30
591-78-6	2-Hexanone	ND	^c	1000	32
124-48-1	Dibromochloromethane	ND		200	27
106-93-4	1,2-Dibromoethane (EDB)	ND		200	36
108-90-7	Chlorobenzene	ND		200	27
630-20-6	1,1,1,2-Tetrachloroethane	ND		200	55
100-41-4	Ethylbenzene	ND		200	45
1330-20-7	Xylenes, Total	ND		600	98
100-42-5	Styrene	ND		200	19

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-49D-0/1-0 Lab Sample ID: 180-48019-2  
 Matrix: Water Lab File ID: 50930015.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 12:57  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 17:03  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 200  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		200	38
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	40
107-13-1	Acrylonitrile	ND		4000	110
123-91-1	1,4-Dioxane	ND		40000	6900

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	93		71-118
460-00-4	4-Bromofluorobenzene (Surr)	87		70-118
1868-53-7	Dibromofluoromethane (Surr)	106		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930015.D  
 Lims ID: 180-48019-A-2 Lab Sample ID: 180-48019-2  
 Client ID: HD-MW-49D-0/1-0  
 Sample Type: Client  
 Inject. Date: 30-Sep-2015 17:03:30 ALS Bottle#: 15 Worklist Smp#: 15  
 Purge Vol: 5.000 mL Dil. Factor: 200.0000  
 Sample Info: 180-48019-A-2, 200x  
 Misc. Info.: 180-0008759-015  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 08:44:35 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 08:44:34

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.259	4.273	-0.014	0	112927	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.290	-0.001	98	313893	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.387	-0.002	86	80476	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.727	12.729	-0.002	96	116063	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.565	6.560	0.005	93	81787	53.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.932	0.004	0	101560	48.0	
\$ 7 Toluene-d8 (Surr)	98	8.937	8.933	0.004	94	289666	46.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.571	11.573	-0.002	90	102224	43.6	
12 Chloromethane	50		1.773				ND	
13 Vinyl chloride	62	1.893	1.907	-0.014	24	1313	0.5684	
15 Bromomethane	94		2.241				ND	
16 Chloroethane	64		2.393				ND	
22 1,1-Dichloroethene	96	3.346	3.342	0.004	94	8098	4.63	
24 Acetone	43		3.446				ND	
26 Carbon disulfide	76		3.628				ND	
31 Methylene Chloride	84		4.139				ND	
33 Acrylonitrile	53		4.522				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.577				ND	
37 1,1-Dichloroethane	63	5.208	5.198	0.010	97	48612	13.0	
45 cis-1,2-Dichloroethene	96	5.956	5.946	0.010	81	174804	86.2	
46 2-Butanone (MEK)	43		5.958				ND	
49 Chlorobromomethane	128		6.232				ND	
52 Chloroform	83		6.384				ND	
53 1,1,1-Trichloroethane	97	6.546	6.536	0.010	96	114630	48.0	
56 Carbon tetrachloride	117		6.713				ND	
58 Benzene	78		6.944				ND	
59 1,2-Dichloroethane	62		7.023				ND	
64 Trichloroethene	130	7.678	7.674	0.004	96	156442	82.6	
67 1,2-Dichloropropane	63		7.947				ND	
70 1,4-Dioxane	88		8.027				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.227				ND	
74 cis-1,3-Dichloropropene	75		8.671				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.830				ND	
76 Toluene	91		9.000				ND	
77 trans-1,3-Dichloropropene	75		9.249				ND	
79 1,1,2-Trichloroethane	97		9.450				ND	
80 Tetrachloroethene	164	9.521	9.517	0.004	94	18524	12.0	
82 2-Hexanone	43		9.657				ND	
84 Chlorodibromomethane	129		9.815				ND	
85 Ethylene Dibromide	107		9.931				ND	
87 Chlorobenzene	112		10.417				ND	
89 1,1,1,2-Tetrachloroethane	131		10.509				ND	
90 Ethylbenzene	106		10.515				ND	
91 m-Xylene & p-Xylene	106		10.649				ND	
92 o-Xylene	106		11.026				ND	
93 Styrene	104		11.044				ND	
94 Bromoform	173		11.233				ND	
99 1,1,2,2-Tetrachloroethane	83		11.707				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930015.D

Injection Date: 30-Sep-2015 17:03:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-A-2

Lab Sample ID: 180-48019-2

Worklist Smp#: 15

Client ID: HD-MW-49D-0/1-0

Purge Vol: 5.000 mL

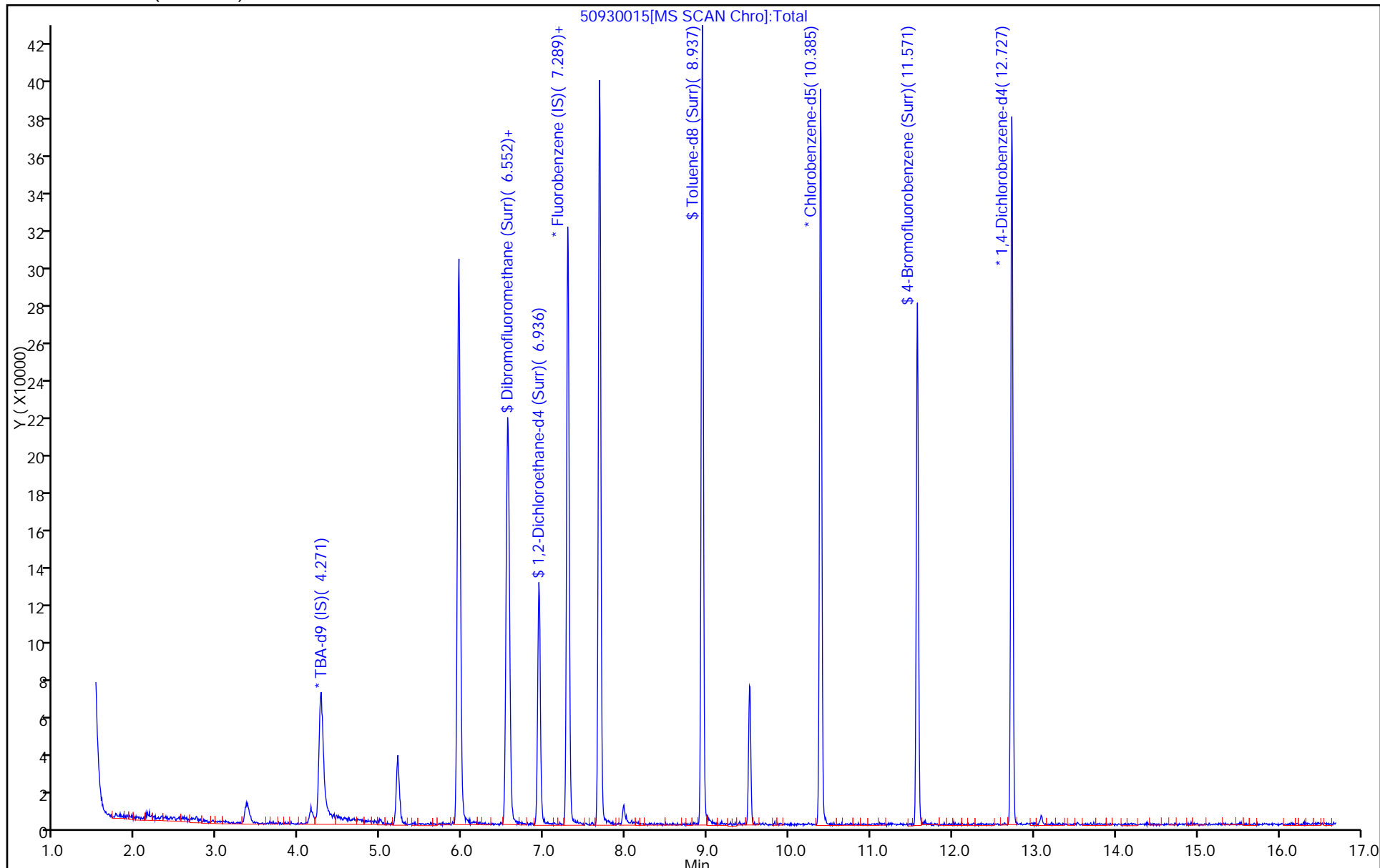
Dil. Factor: 200.0000

ALS Bottle#: 15

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930015.D

Injection Date: 30-Sep-2015 17:03:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-2

Lab Sample ID: 180-48019-2

Client ID: HD-MW-49D-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 200.0000

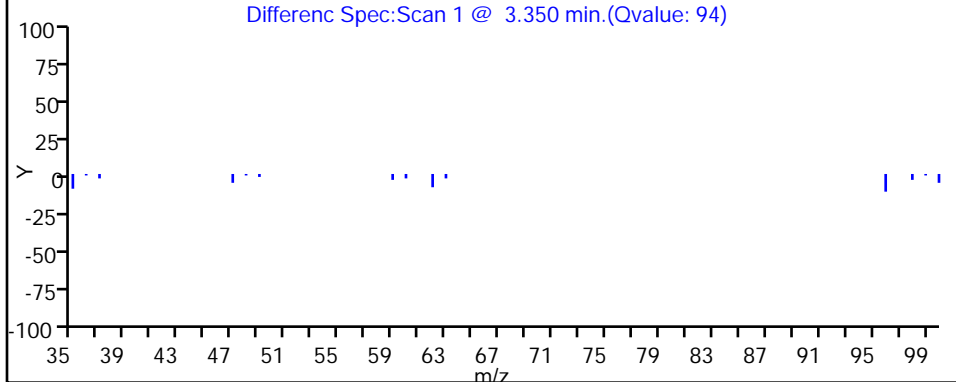
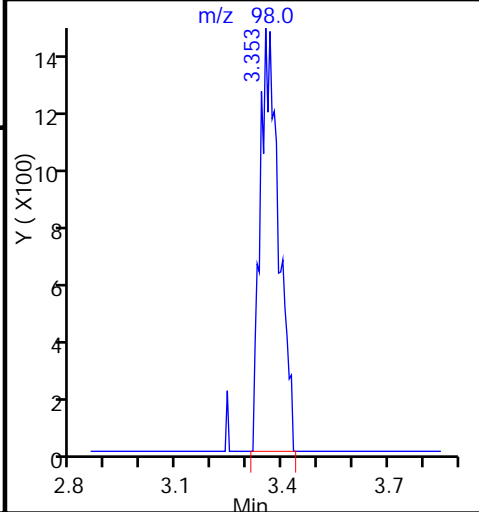
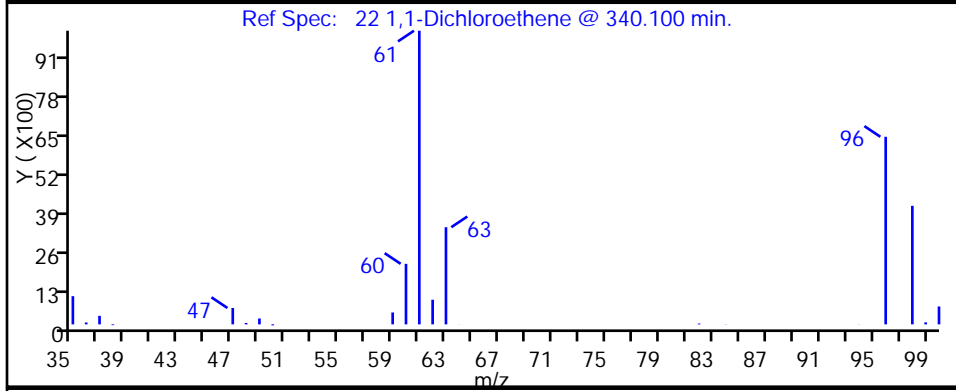
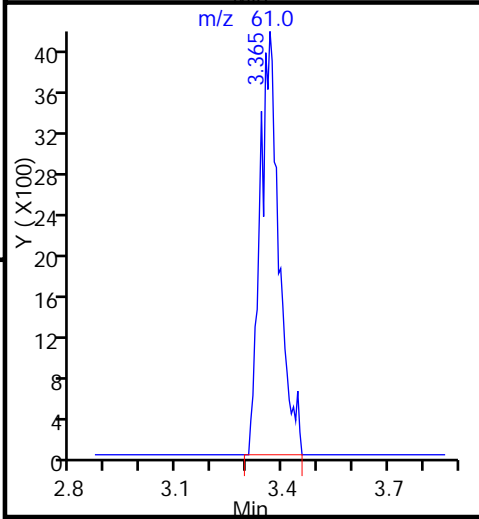
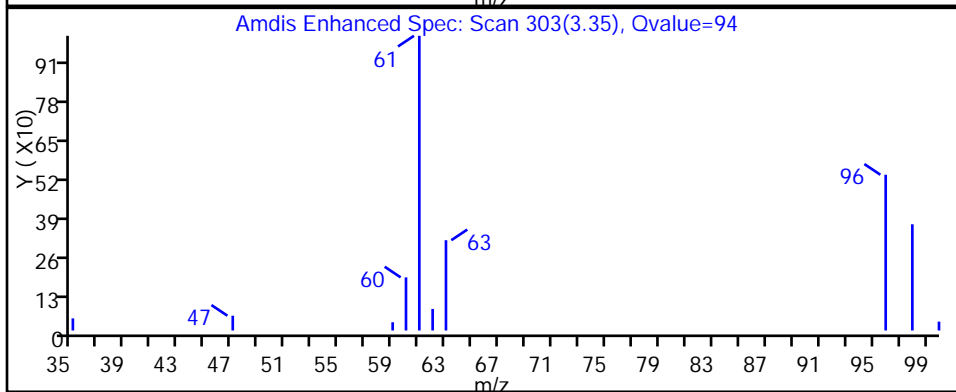
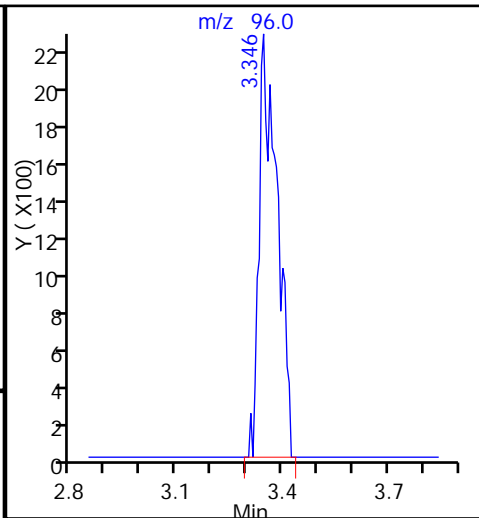
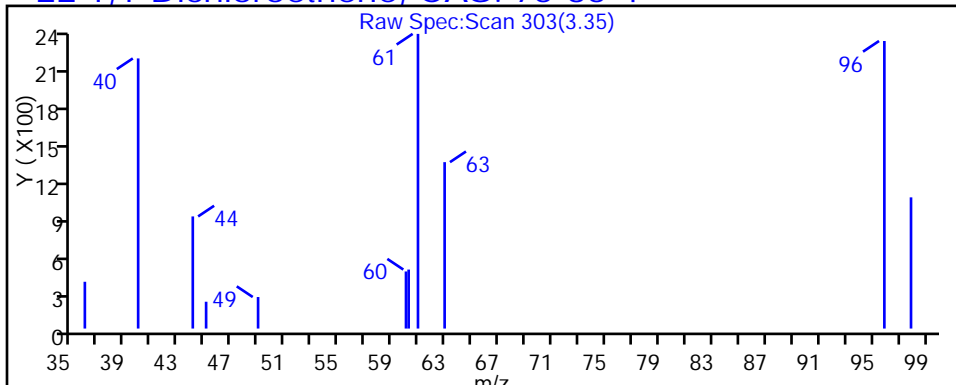
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930015.D

Injection Date: 30-Sep-2015 17:03:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-2

Lab Sample ID: 180-48019-2

Client ID: HD-MW-49D-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 200.0000

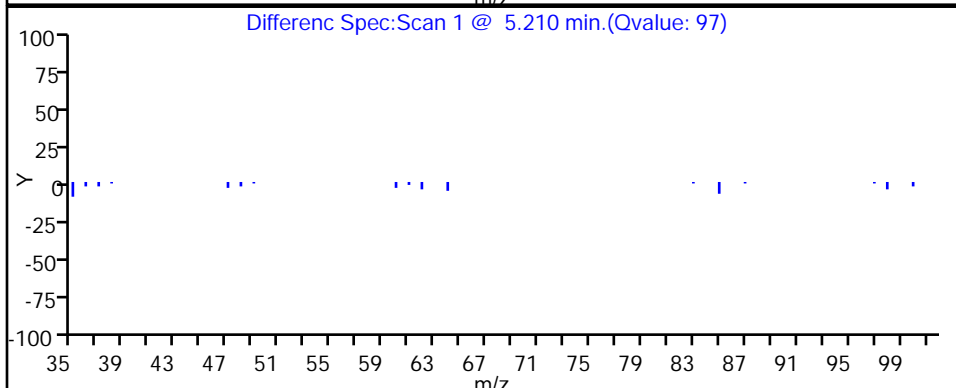
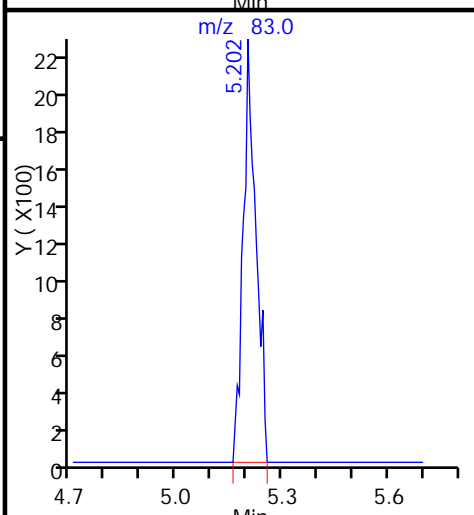
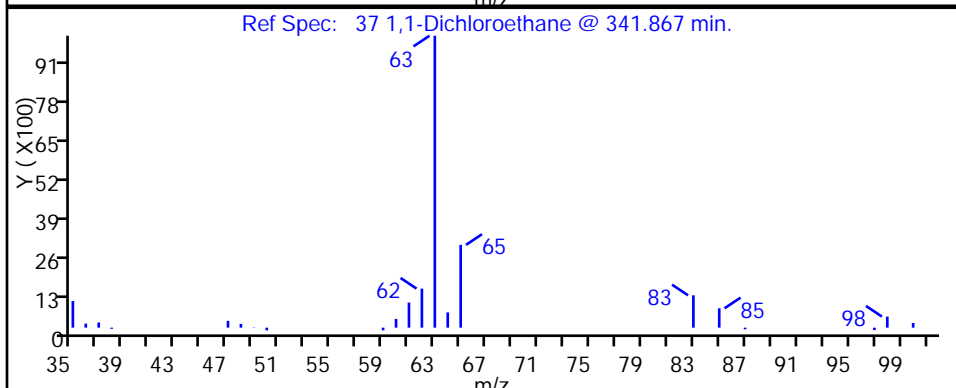
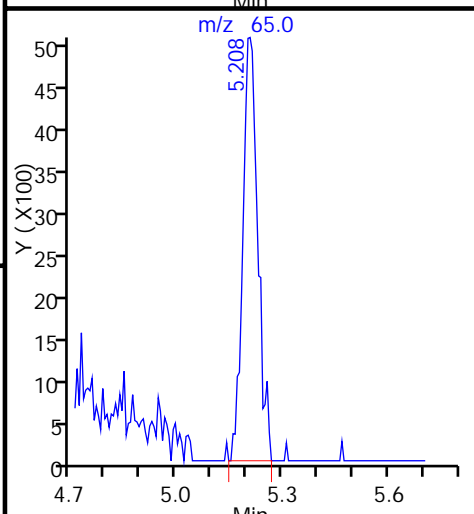
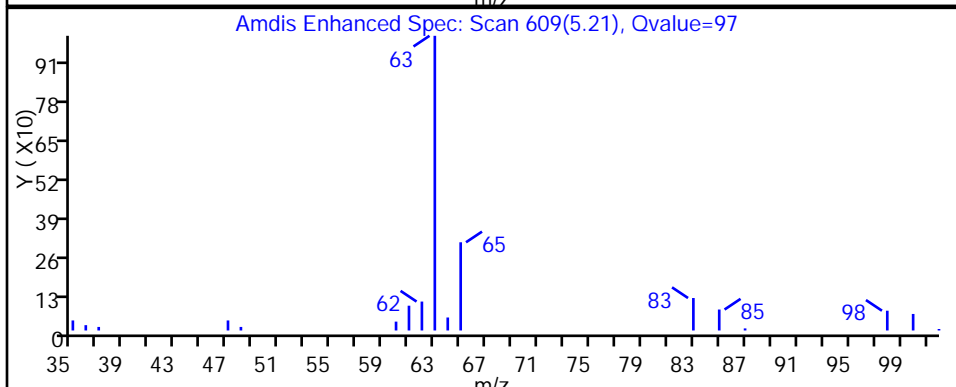
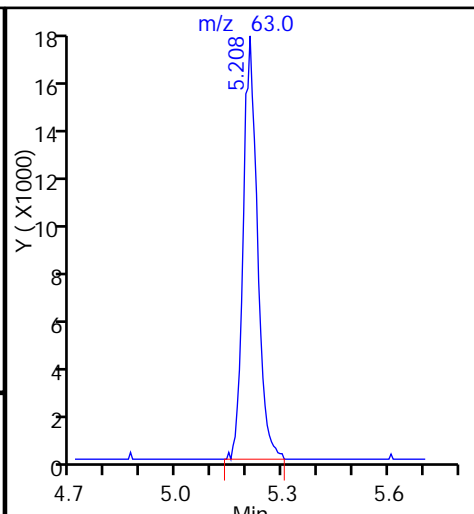
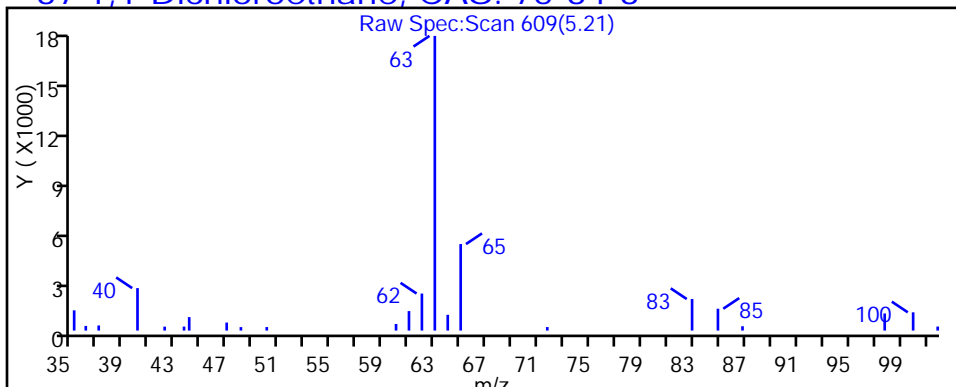
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930015.D

Injection Date: 30-Sep-2015 17:03:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-2

Lab Sample ID: 180-48019-2

Client ID: HD-MW-49D-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 200.0000

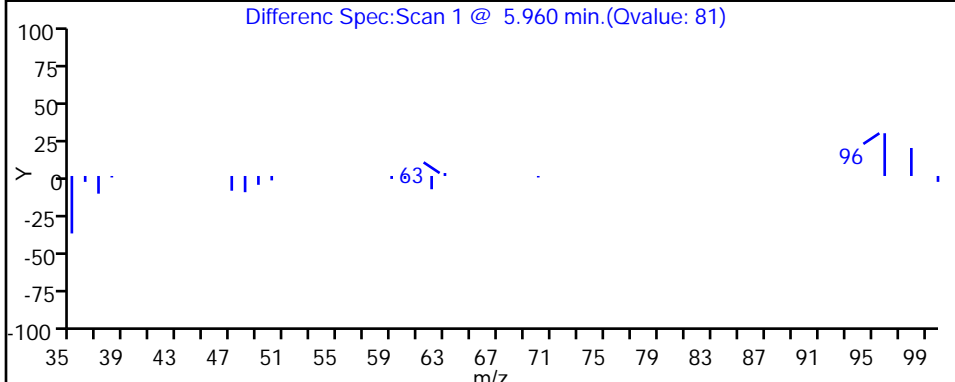
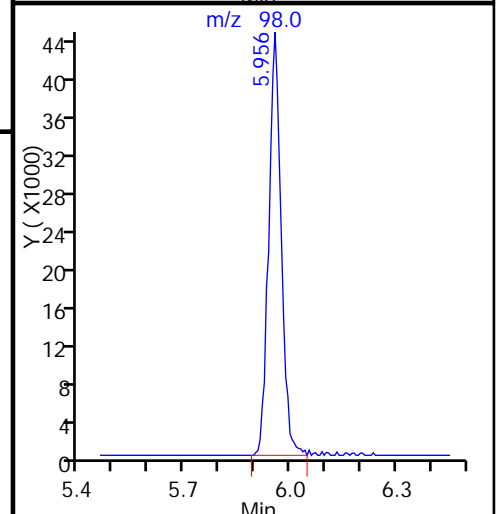
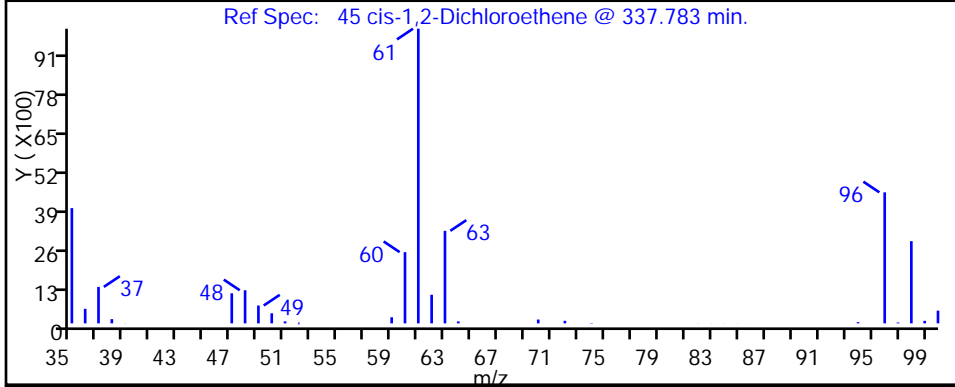
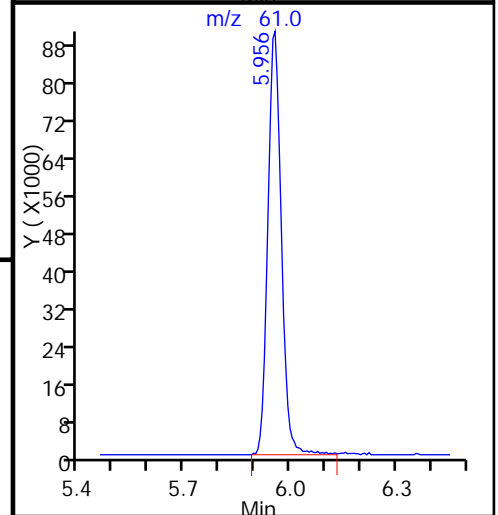
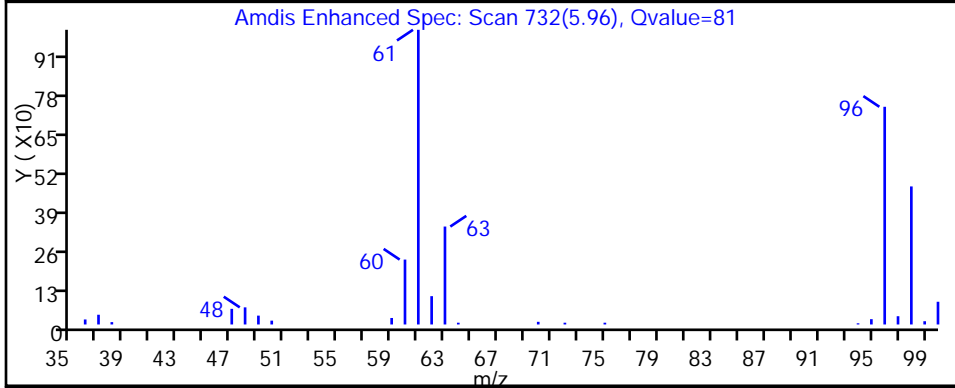
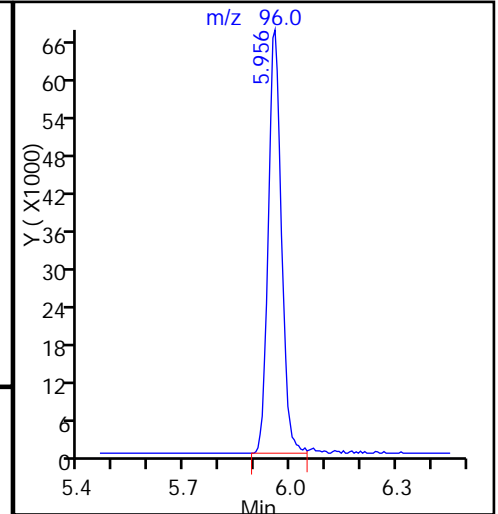
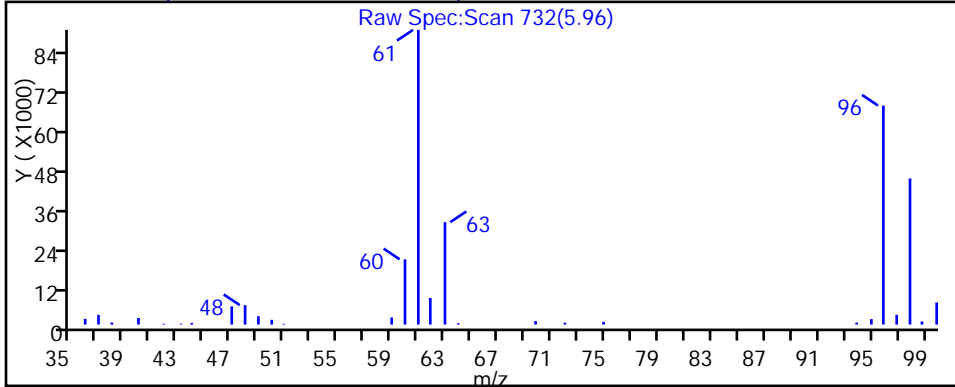
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930015.D

Injection Date: 30-Sep-2015 17:03:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-2

Lab Sample ID: 180-48019-2

Client ID: HD-MW-49D-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 200.0000

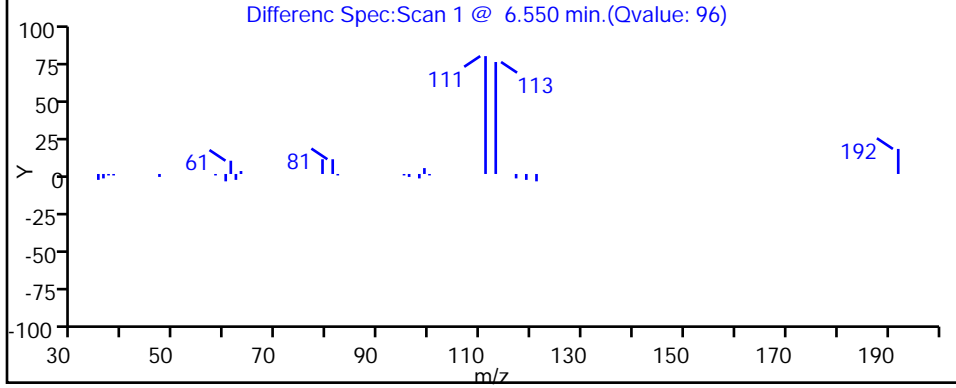
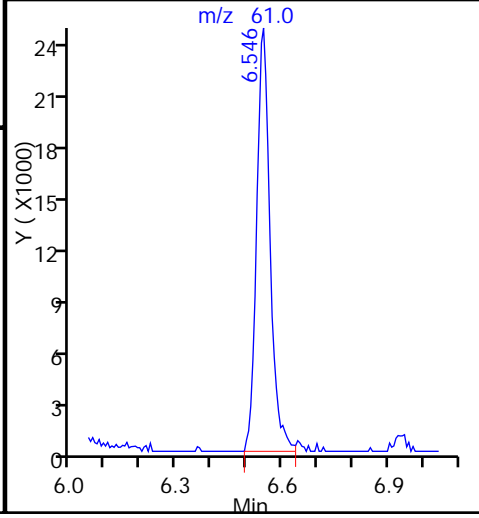
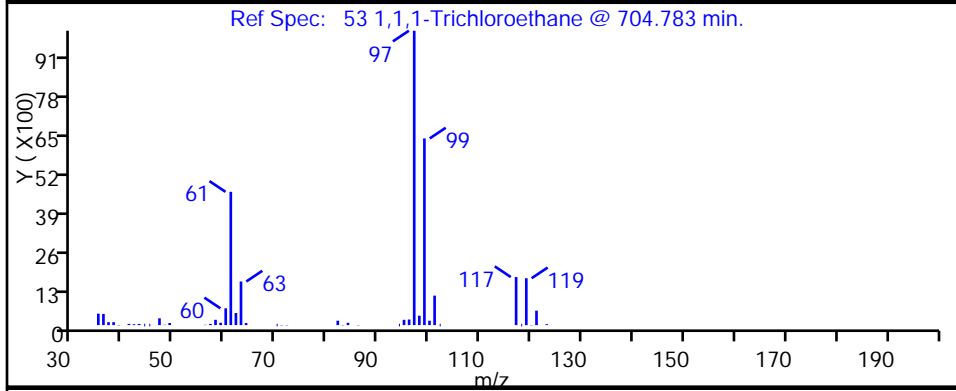
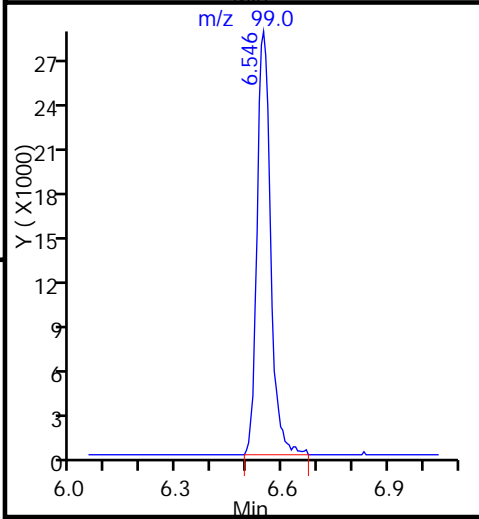
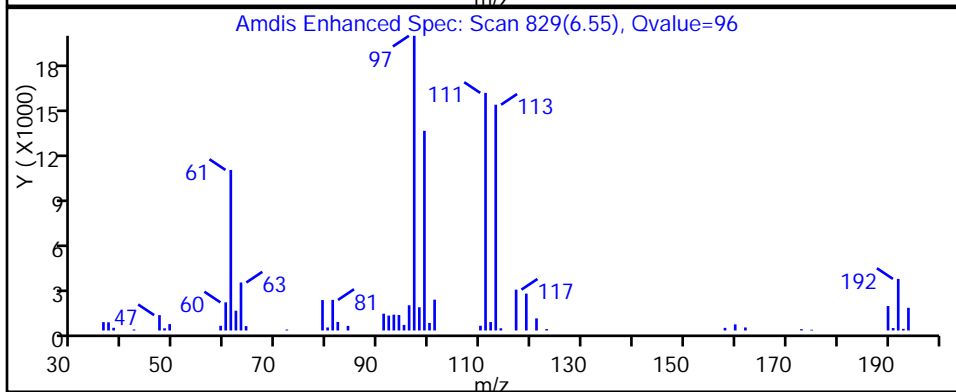
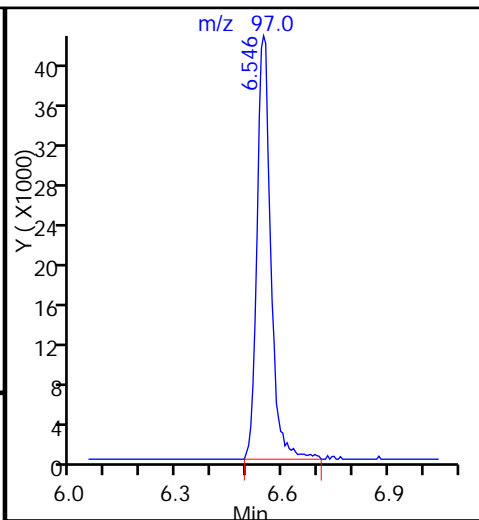
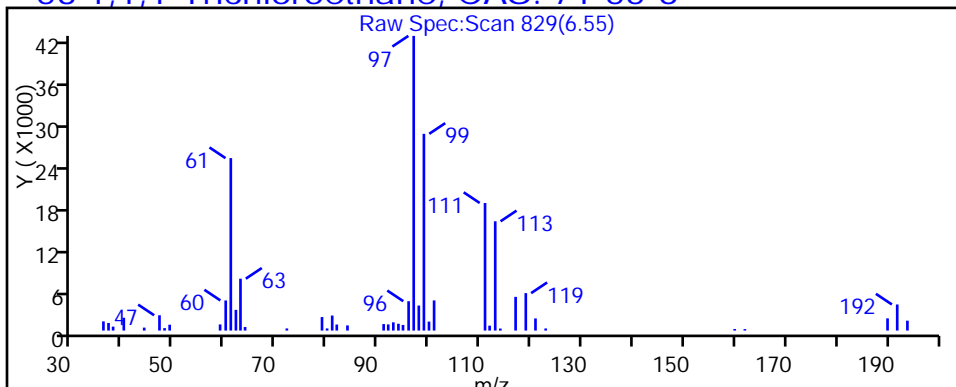
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930015.D

Injection Date: 30-Sep-2015 17:03:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-2

Lab Sample ID: 180-48019-2

Client ID: HD-MW-49D-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 200.0000

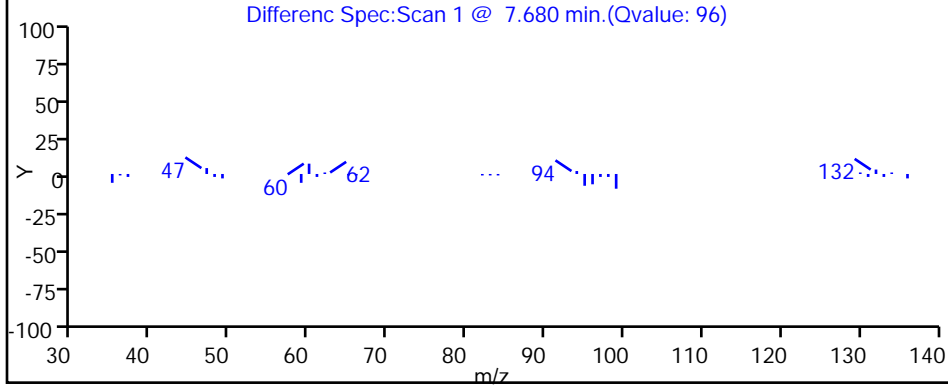
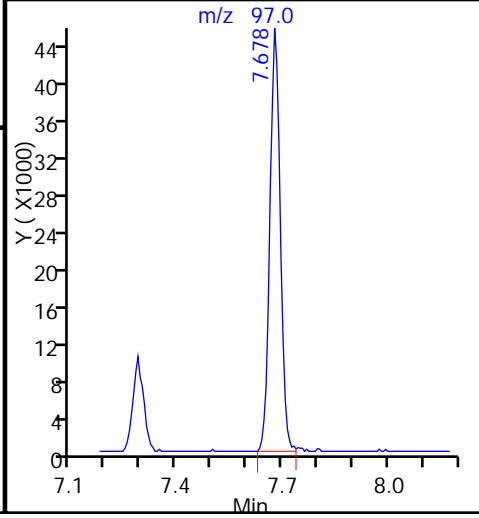
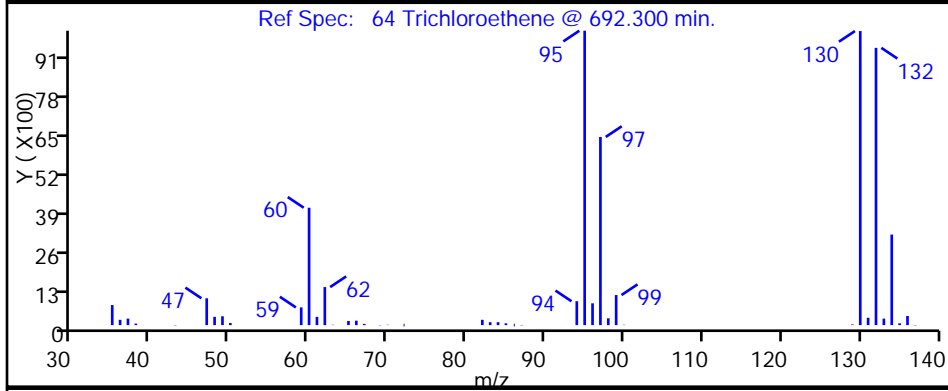
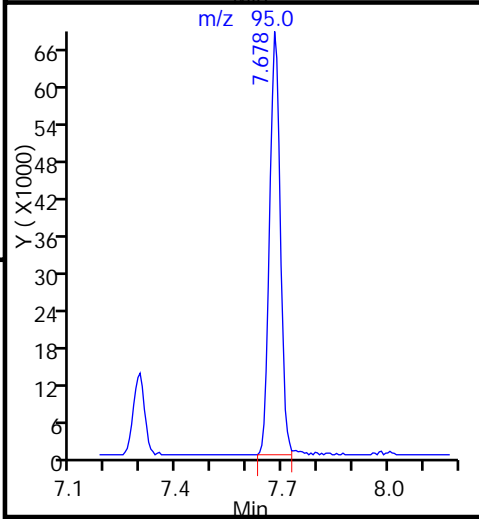
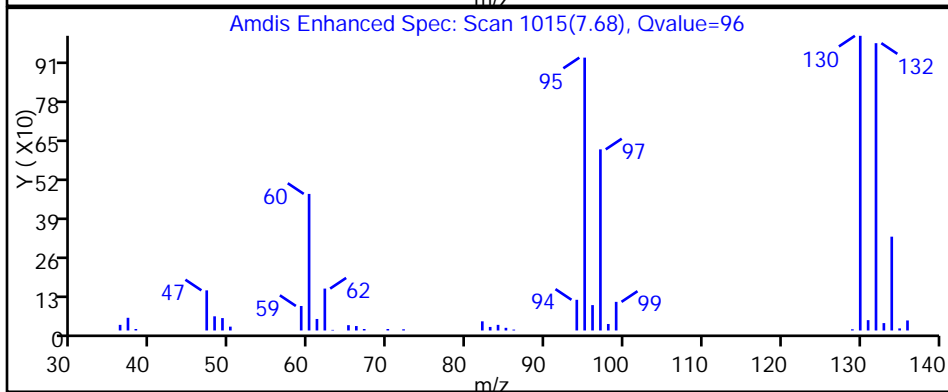
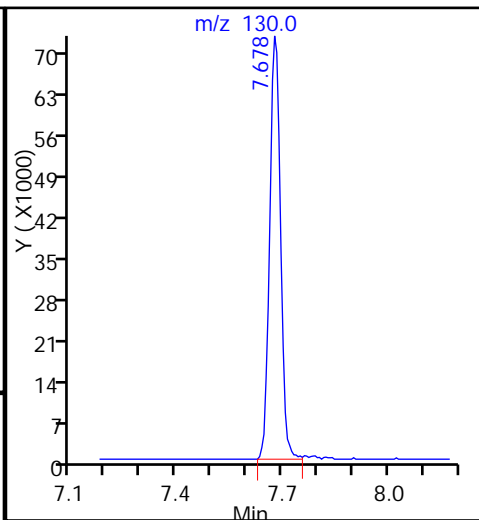
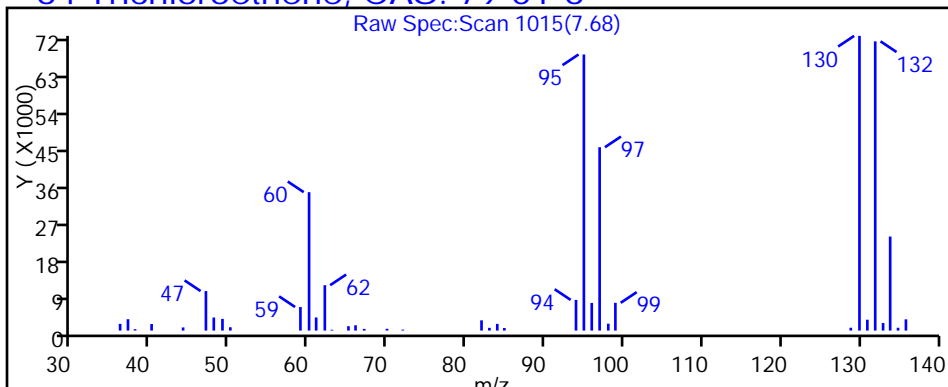
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930015.D

Injection Date: 30-Sep-2015 17:03:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-2

Lab Sample ID: 180-48019-2

Client ID: HD-MW-49D-0/1-0

Operator ID: 001562

ALS Bottle#: 15 Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 200.0000

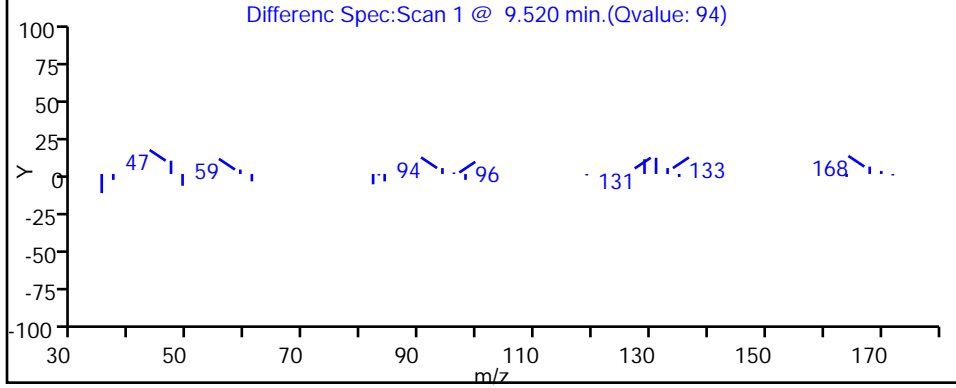
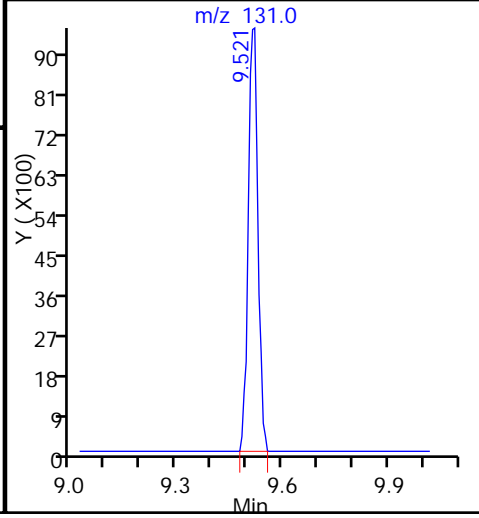
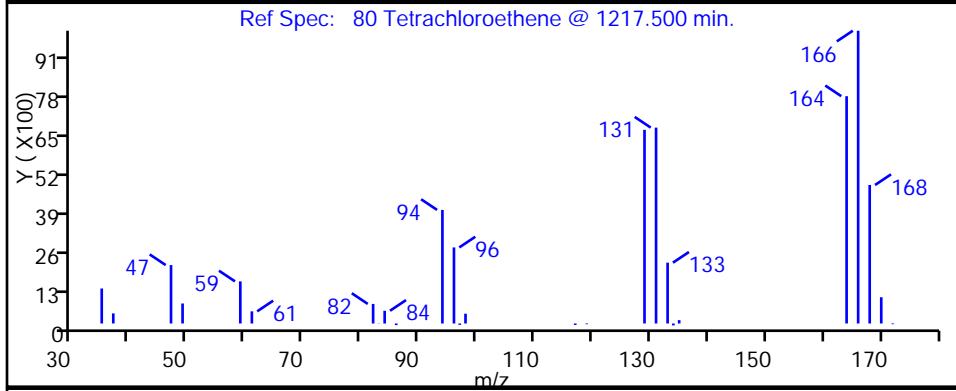
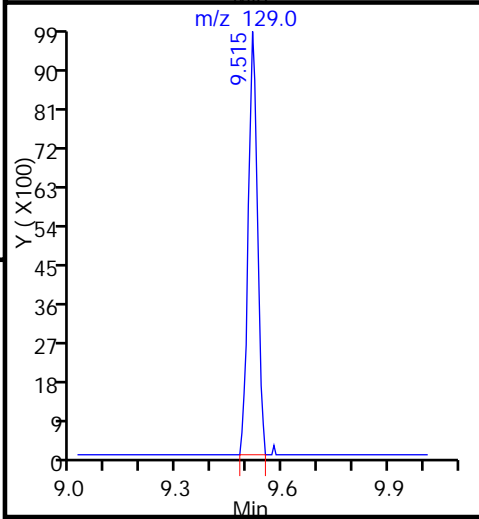
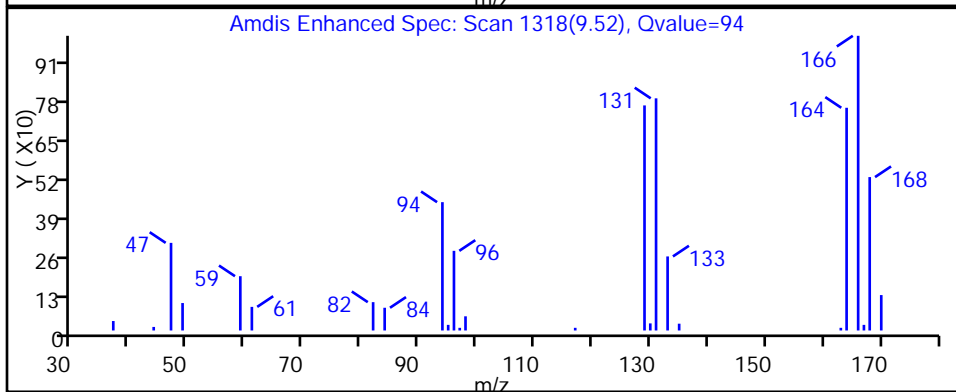
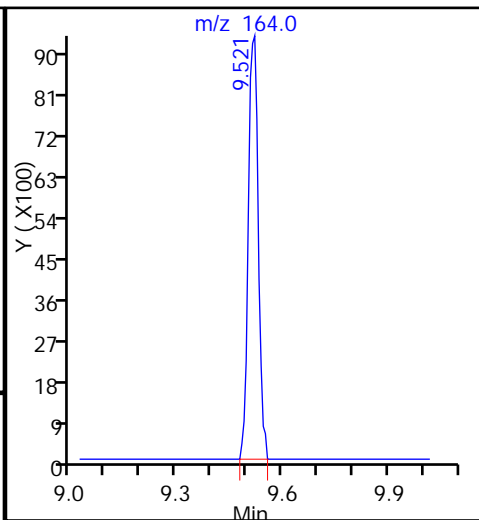
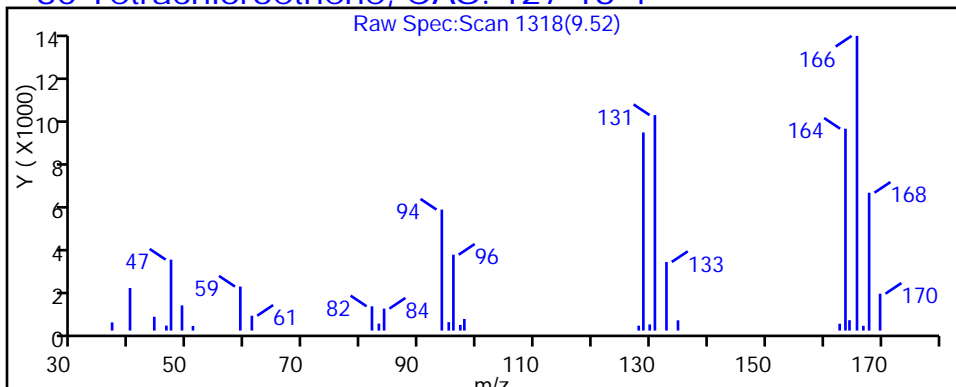
Method: MSVOA\_LL\_CHHP5

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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-12-0/1-0 Lab Sample ID: 180-48019-3  
 Matrix: Water Lab File ID: 50930016.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 14:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 17:27  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	59	E	1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	120	E	1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	6.4		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-12-0/1-0 Lab Sample ID: 180-48019-3  
 Matrix: Water Lab File ID: 50930016.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 14:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 17:27  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	90		70-118
1868-53-7	Dibromofluoromethane (Surr)	106		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930016.D  
 Lims ID: 180-48019-C-3 Lab Sample ID: 180-48019-3  
 Client ID: HD-MW-12-0/1-0  
 Sample Type: Client  
 Inject. Date: 30-Sep-2015 17:27:30 ALS Bottle#: 16 Worklist Smp#: 16  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-48019-C-3  
 Misc. Info.: 180-0008759-016  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 08:47:56 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 08:47:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.267	4.273	-0.007	0	111918	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.290	0.000	98	306669	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.387	-0.001	87	78032	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.729	12.729	0.000	95	112525	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.566	6.560	0.006	94	79880	53.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.932	0.005	0	100167	48.4	
\$ 7 Toluene-d8 (Surr)	98	8.939	8.933	0.006	94	292246	48.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.573	11.573	0.000	89	102020	44.9	
12 Chloromethane	50	1.772	1.773	-0.001	1	2122	0.8342	
13 Vinyl chloride	62		1.907				ND	
15 Bromomethane	94		2.241				ND	
16 Chloroethane	64		2.393				ND	
22 1,1-Dichloroethene	96		3.342				ND	
24 Acetone	43	3.445	3.446	-0.001	64	3702	5.98	
26 Carbon disulfide	76		3.628				ND	
31 Methylene Chloride	84		4.139				ND	
33 Acrylonitrile	53		4.522				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.577				ND	
37 1,1-Dichloroethane	63		5.198				ND	
45 cis-1,2-Dichloroethene	96	5.958	5.946	0.012	84	580811	293.1	E
46 2-Butanone (MEK)	43		5.958				ND	
49 Chlorobromomethane	128		6.232				ND	
52 Chloroform	83		6.384				ND	
53 1,1,1-Trichloroethane	97		6.536				ND	
56 Carbon tetrachloride	117		6.713				ND	
58 Benzene	78		6.944				ND	
59 1,2-Dichloroethane	62		7.023				ND	
64 Trichloroethene	130	7.679	7.674	0.005	96	1148500	620.8	E
67 1,2-Dichloropropane	63		7.947				ND	
70 1,4-Dioxane	88		8.027				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.227				ND	
74 cis-1,3-Dichloropropene	75		8.671				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.830				ND	
76 Toluene	91		9.000				ND	
77 trans-1,3-Dichloropropene	75		9.249				ND	
79 1,1,2-Trichloroethane	97		9.450				ND	
80 Tetrachloroethene	164	9.517	9.517	0.000	97	48085	32.1	
82 2-Hexanone	43		9.657				ND	
84 Chlorodibromomethane	129		9.815				ND	
85 Ethylene Dibromide	107		9.931				ND	
87 Chlorobenzene	112		10.417				ND	
89 1,1,1,2-Tetrachloroethane	131		10.509				ND	
90 Ethylbenzene	106		10.515				ND	
91 m-Xylene & p-Xylene	106		10.649				ND	
92 o-Xylene	106		11.026				ND	
93 Styrene	104		11.044				ND	
94 Bromoform	173		11.233				ND	
99 1,1,2,2-Tetrachloroethane	83		11.707				ND	
S 133 Xylenes, Total	106		1.000				ND	

### QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

### Reagents:

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930016.D

Injection Date: 30-Sep-2015 17:27:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-C-3

Lab Sample ID: 180-48019-3

Worklist Smp#: 16

Client ID: HD-MW-12-0/1-0

Purge Vol: 5.000 mL

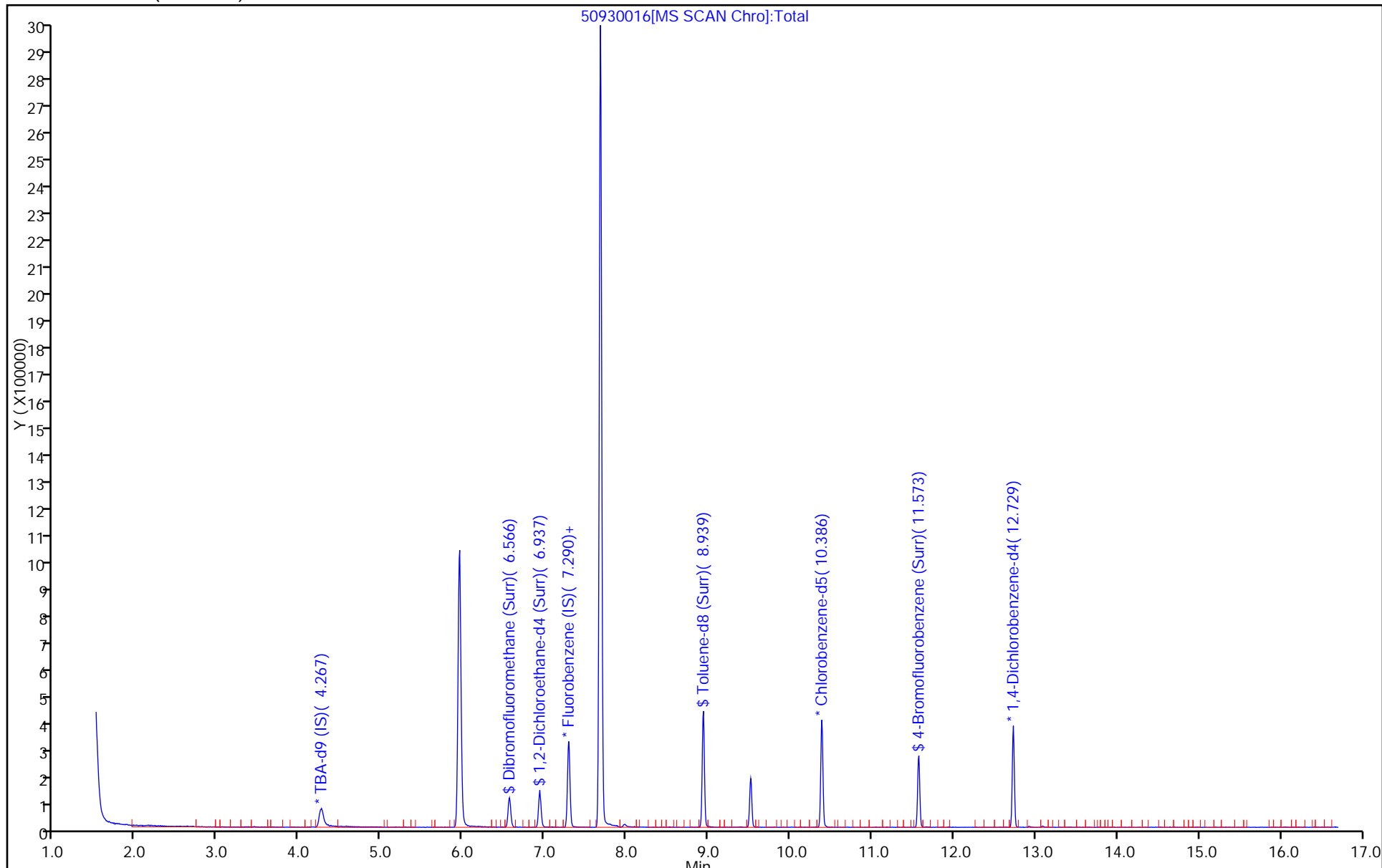
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930016.D

Injection Date: 30-Sep-2015 17:27:30

Instrument ID: CHHP5

Lims ID: 180-48019-C-3

Lab Sample ID: 180-48019-3

Client ID: HD-MW-12-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

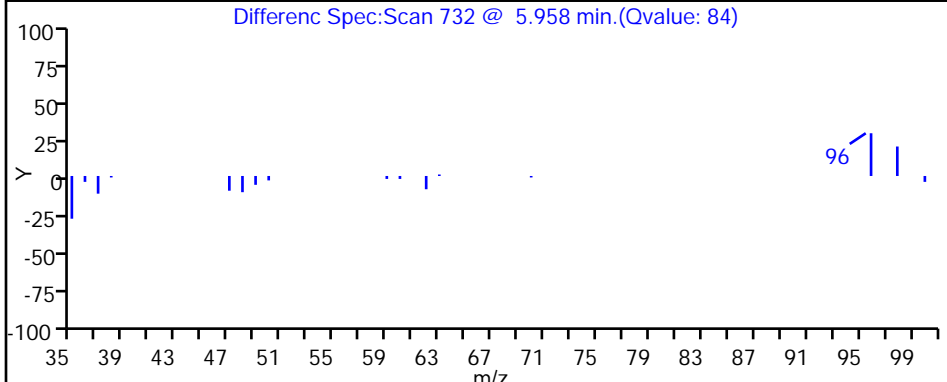
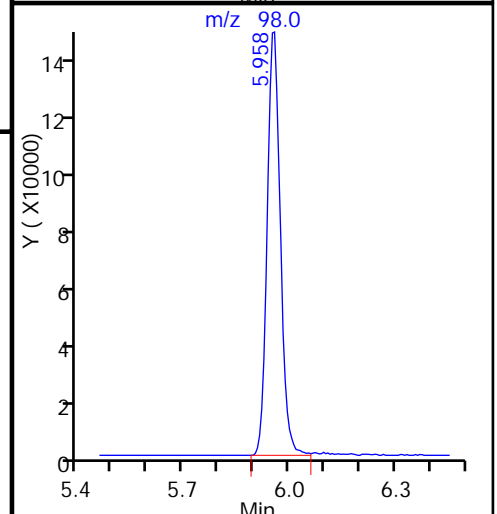
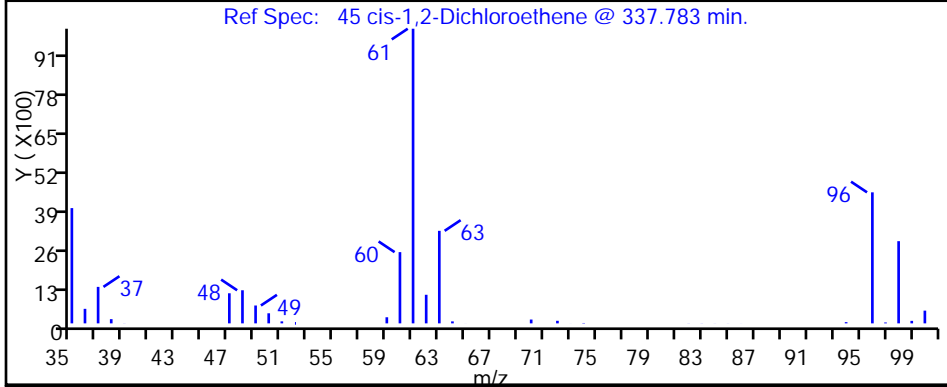
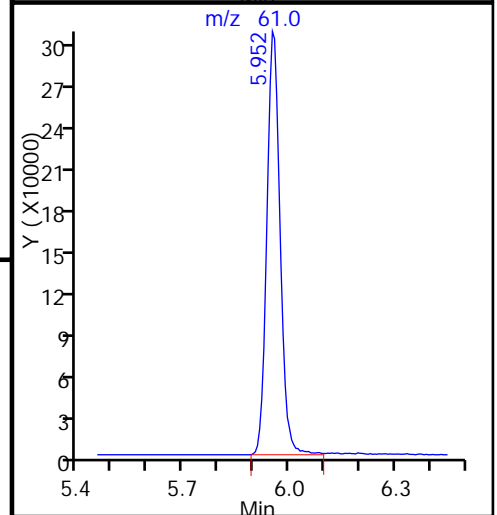
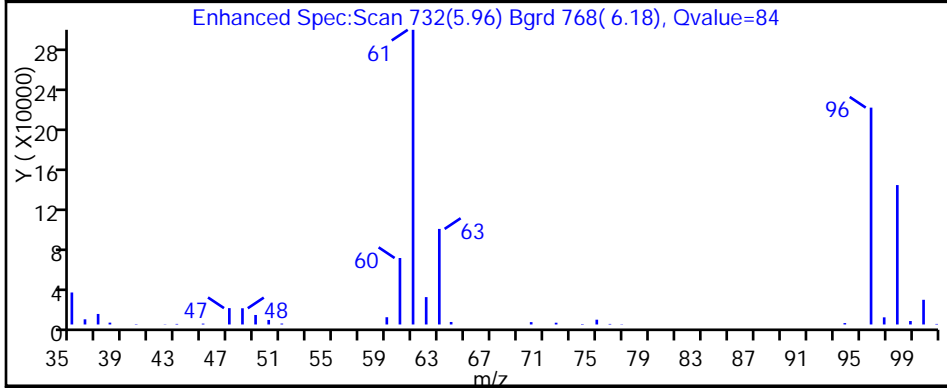
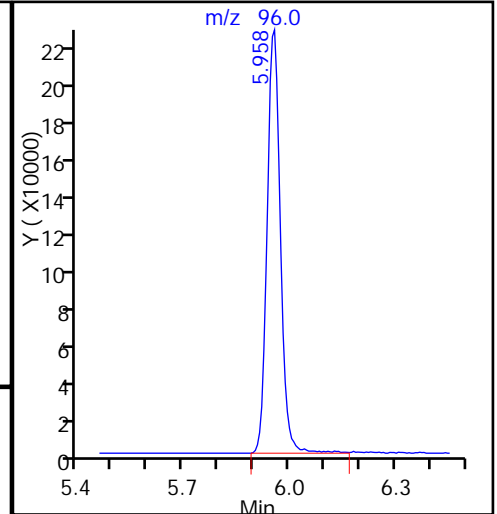
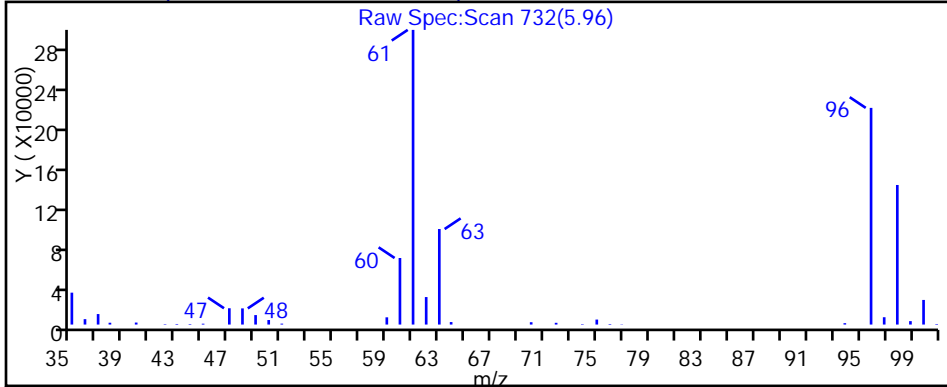
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930016.D

Injection Date: 30-Sep-2015 17:27:30

Instrument ID: CHHP5

Lims ID: 180-48019-C-3

Lab Sample ID: 180-48019-3

Client ID: HD-MW-12-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

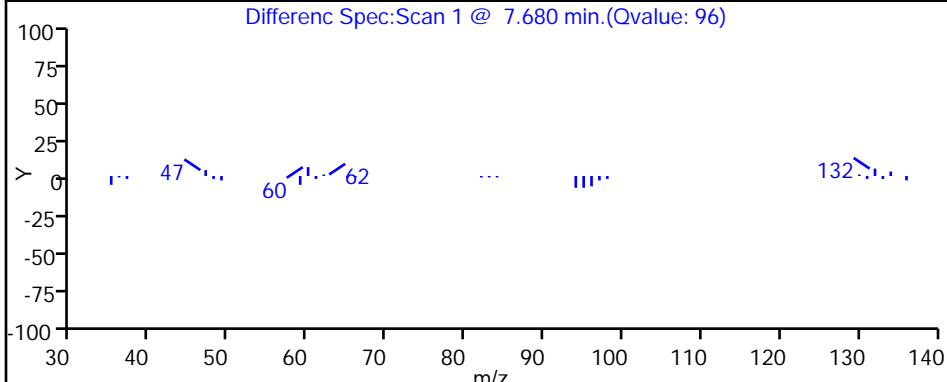
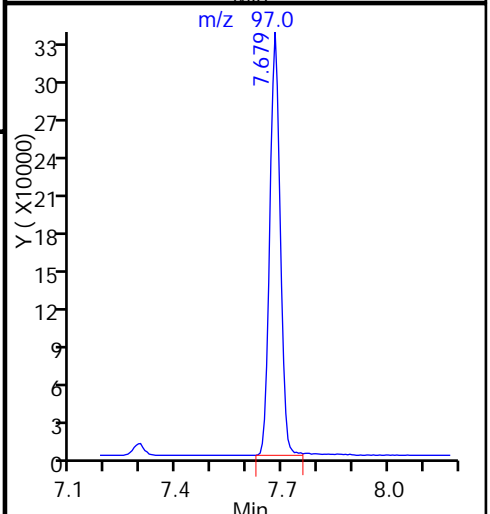
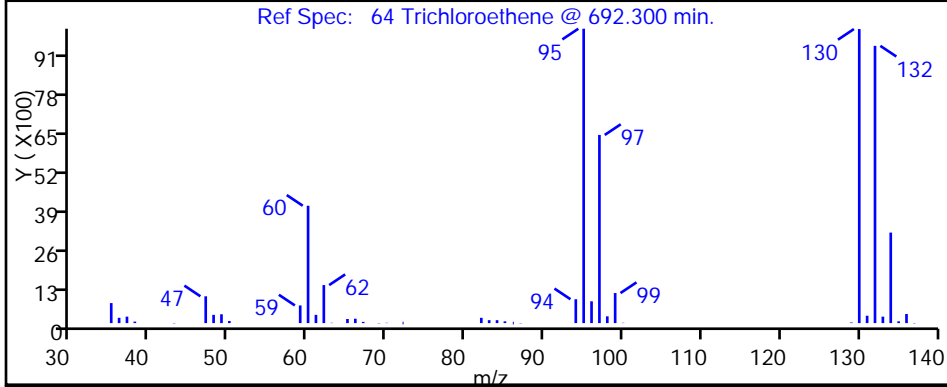
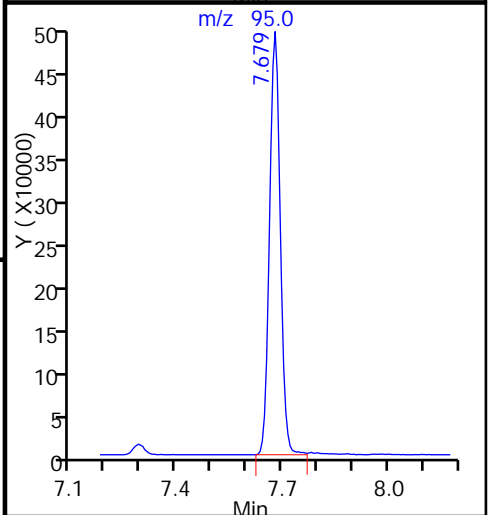
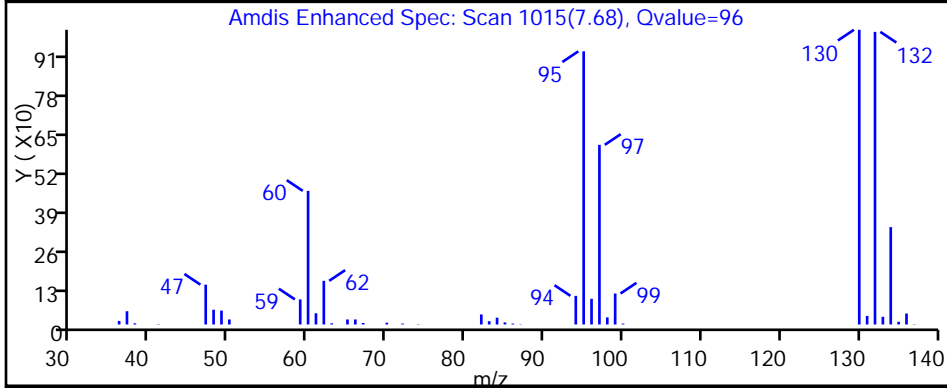
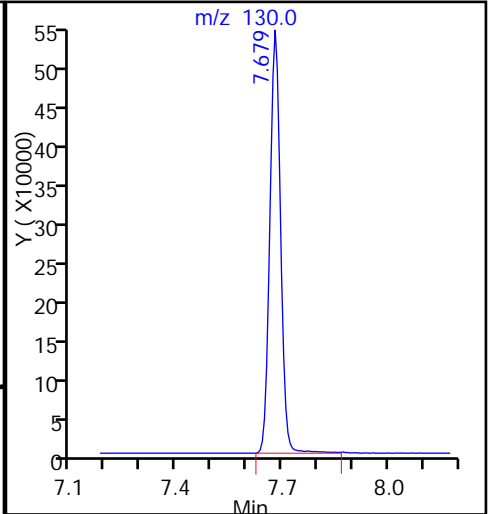
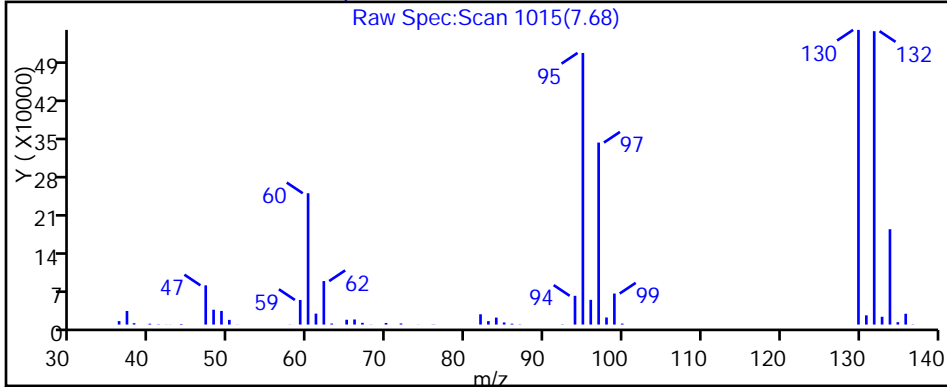
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930016.D

Injection Date: 30-Sep-2015 17:27:30

Instrument ID: CHHP5

Lims ID: 180-48019-C-3

Lab Sample ID: 180-48019-3

Client ID: HD-MW-12-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

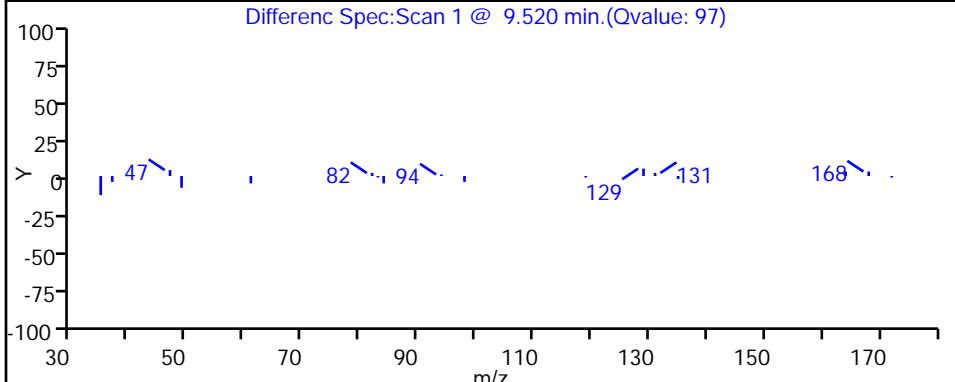
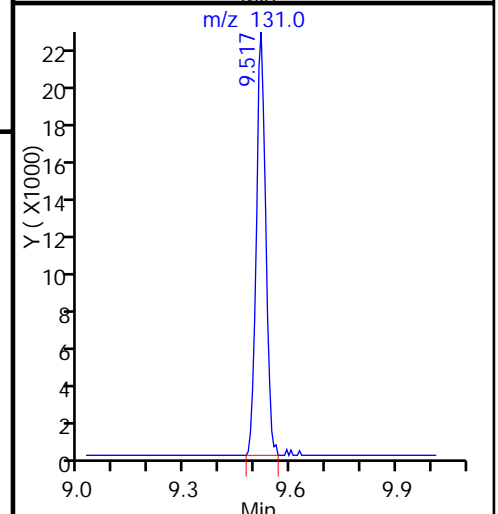
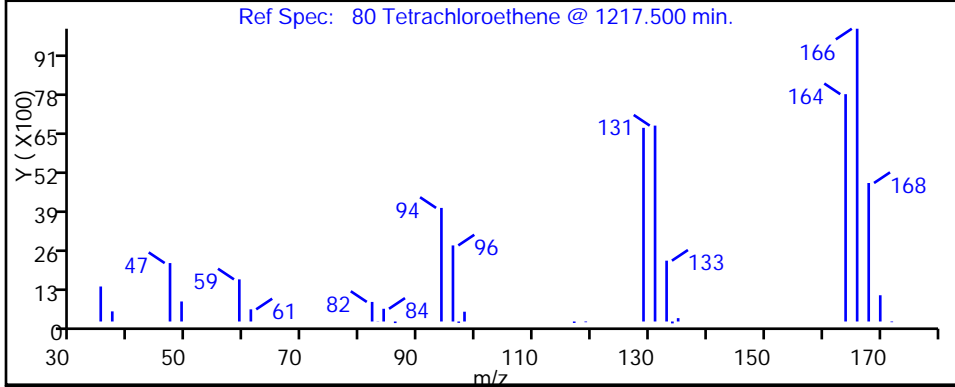
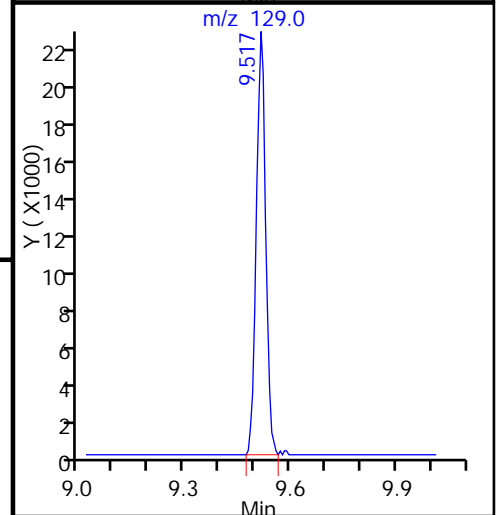
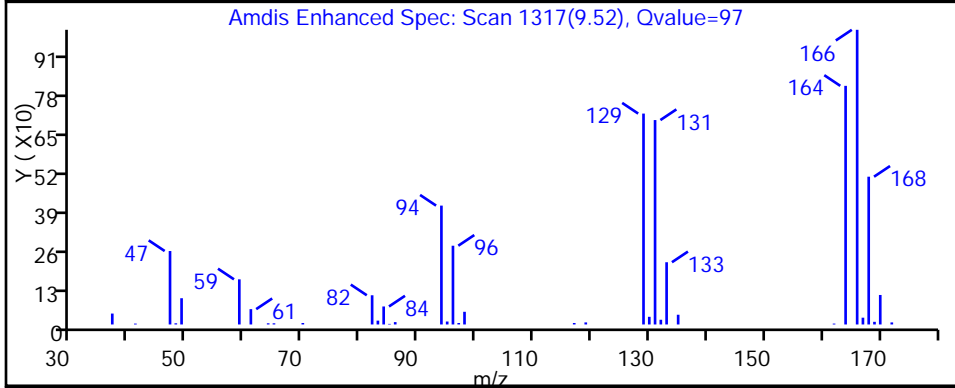
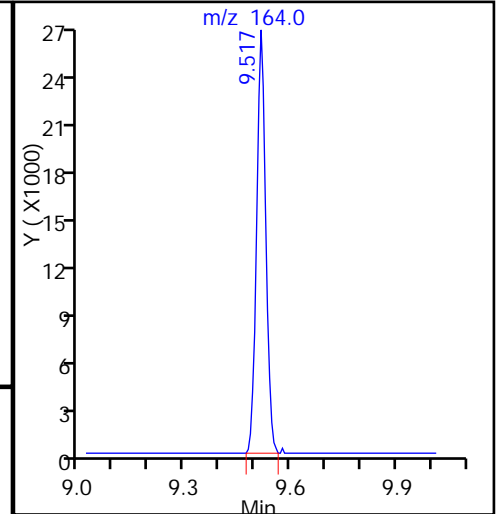
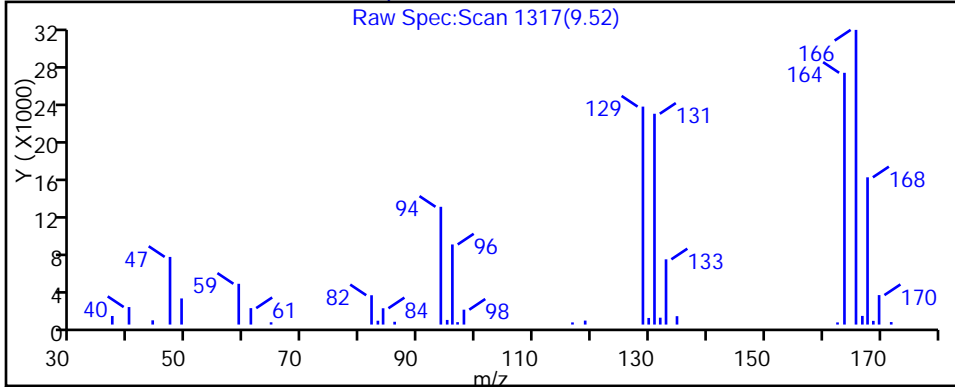
Method: MSVOA\_LL\_CHHP5

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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-12-0/1-0 DL Lab Sample ID: 180-48019-3 DL  
 Matrix: Water Lab File ID: 51001015.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 14:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 18:12  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 10  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		10	2.8
75-01-4	Vinyl chloride	ND		10	2.3
74-83-9	Bromomethane	ND		10	3.1
75-00-3	Chloroethane	ND		10	2.1
75-35-4	1,1-Dichloroethene	ND		10	3.0
67-64-1	Acetone	ND		50	25
75-15-0	Carbon disulfide	ND		10	2.1
75-09-2	Methylene Chloride	ND		10	1.3
156-60-5	trans-1,2-Dichloroethene	ND		10	1.7
1634-04-4	Methyl tert-butyl ether	ND		10	1.8
75-34-3	1,1-Dichloroethane	ND		10	1.2
156-59-2	cis-1,2-Dichloroethene	52		10	2.4
74-97-5	Bromochloromethane	ND		10	1.8
78-93-3	2-Butanone (MEK)	ND		50	5.5
67-66-3	Chloroform	ND		10	1.7
71-55-6	1,1,1-Trichloroethane	ND		10	2.9
56-23-5	Carbon tetrachloride	ND		10	1.4
71-43-2	Benzene	ND		10	1.1
107-06-2	1,2-Dichloroethane	ND		10	2.1
79-01-6	Trichloroethene	120		10	1.4
78-87-5	1,2-Dichloropropane	ND		10	0.95
75-27-4	Bromodichloromethane	ND		10	1.3
10061-01-5	cis-1,3-Dichloropropene	ND	^c	10	1.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	50	5.3
108-88-3	Toluene	ND		10	1.5
10061-02-6	trans-1,3-Dichloropropene	ND		10	1.5
79-00-5	1,1,2-Trichloroethane	ND		10	2.0
127-18-4	Tetrachloroethene	5.8	J	10	1.5
591-78-6	2-Hexanone	ND	^c	50	1.6
124-48-1	Dibromochloromethane	ND		10	1.4
106-93-4	1,2-Dibromoethane (EDB)	ND		10	1.8
108-90-7	Chlorobenzene	ND		10	1.4
630-20-6	1,1,1,2-Tetrachloroethane	ND		10	2.8
100-41-4	Ethylbenzene	ND		10	2.3
1330-20-7	Xylenes, Total	ND		30	4.9
100-42-5	Styrene	ND		10	0.97

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-12-0/1-0 DL Lab Sample ID: 180-48019-3 DL  
 Matrix: Water Lab File ID: 51001015.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 14:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 18:12  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 10  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	<i>Bromoform</i>	ND		10	1.9
79-34-5	<i>1,1,2,2-Tetrachloroethane</i>	ND		10	2.0
107-13-1	<i>Acrylonitrile</i>	ND		200	5.5
123-91-1	<i>1,4-Dioxane</i>	ND		2000	340

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		64-135
2037-26-5	Toluene-d8 (Surr)	93		71-118
460-00-4	4-Bromofluorobenzene (Surr)	91		70-118
1868-53-7	Dibromofluoromethane (Surr)	107		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001015.D  
 Lims ID: 180-48019-B-3 Lab Sample ID: 180-48019-3  
 Client ID: HD-MW-12-0/1-0  
 Sample Type: Client  
 Inject. Date: 01-Oct-2015 18:12:30 ALS Bottle#: 12 Worklist Smp#: 15  
 Purge Vol: 5.000 mL Dil. Factor: 10.0000  
 Sample Info: 180-48019-B-3, 10x  
 Misc. Info.: 180-0008778-015  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 02-Oct-2015 07:44:16 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 02-Oct-2015 07:44:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.262	4.278	-0.016	0	93267	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.289	0.003	98	295614	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.386	0.002	87	74571	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.728	0.002	96	111745	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.568	6.559	0.009	93	77380	53.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.939	6.936	0.003	0	98486	49.4	
\$ 7 Toluene-d8 (Surr)	98	8.940	8.938	0.002	94	266579	46.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.568	11.572	-0.004	90	98299	45.3	
12 Chloromethane	50		1.759				ND	
13 Vinyl chloride	62		1.905				ND	
15 Bromomethane	94		2.234				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96		3.347				ND	
24 Acetone	43		3.438				ND	
26 Carbon disulfide	76		3.633				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.576				ND	
37 1,1-Dichloroethane	63		5.196				ND	
45 cis-1,2-Dichloroethene	96	5.959	5.951	0.008	82	49486	25.9	
46 2-Butanone (MEK)	43		5.957				ND	
49 Chlorobromomethane	128		6.231				ND	
52 Chloroform	83		6.383				ND	
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.711				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.022				ND	
64 Trichloroethene	130	7.675	7.679	-0.004	95	102927	57.7	
67 1,2-Dichloropropane	63		7.952				ND	
70 1,4-Dioxane	88		8.025				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.676				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		9.005				ND	
77 trans-1,3-Dichloropropene	75		9.254				ND	
79 1,1,2-Trichloroethane	97		9.449				ND	
80 Tetrachloroethene	164	9.518	9.516	0.002	93	4165	2.91	
82 2-Hexanone	43		9.656				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.929				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.031				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001015.D

Injection Date: 01-Oct-2015 18:12:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-B-3

Lab Sample ID: 180-48019-3

Worklist Smp#: 15

Client ID: HD-MW-12-0/1-0

Purge Vol: 5.000 mL

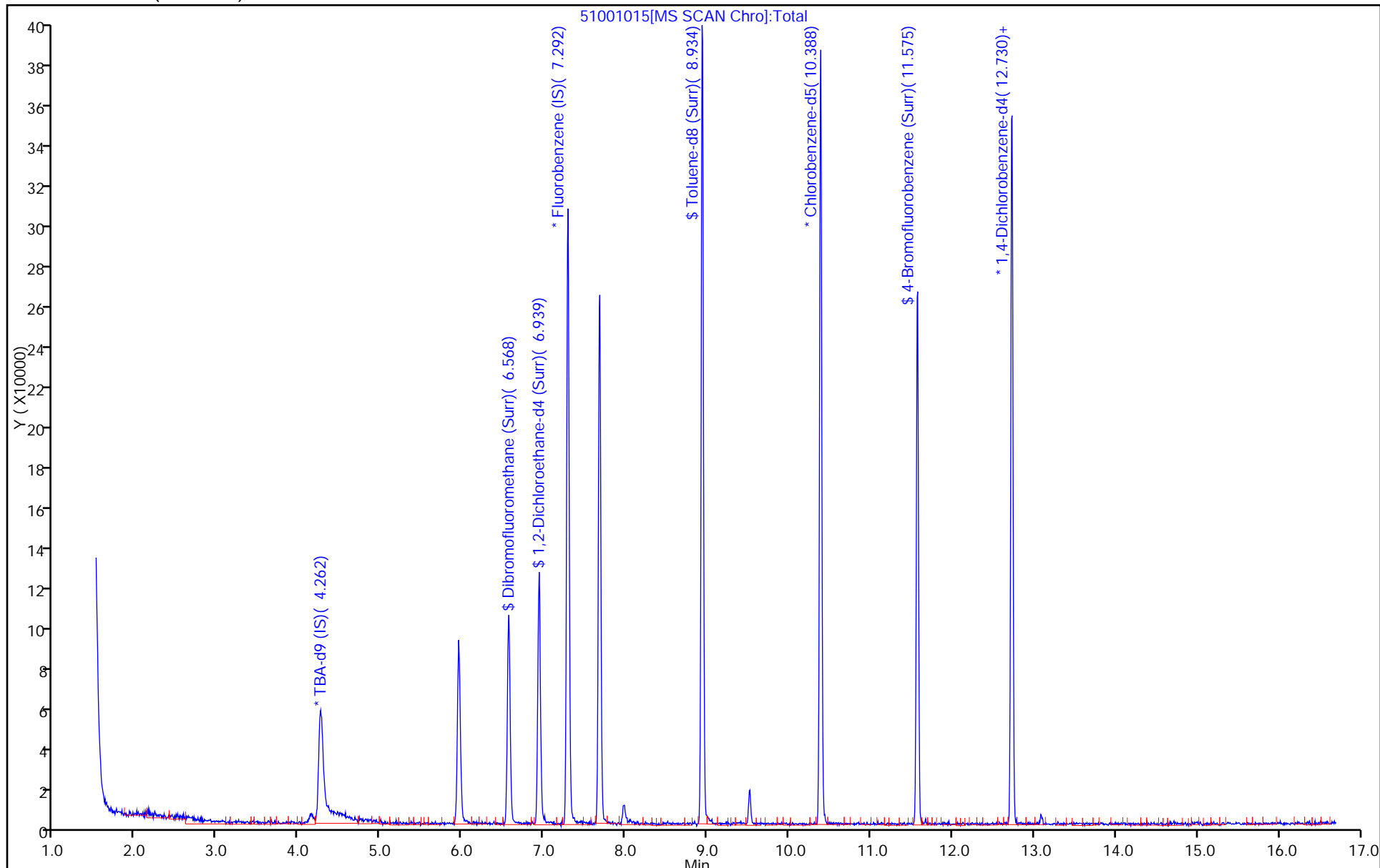
Dil. Factor: 10.0000

ALS Bottle#: 12

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001015.D

Injection Date: 01-Oct-2015 18:12:30

Instrument ID: CHHP5

Lims ID: 180-48019-B-3

Lab Sample ID: 180-48019-3

Client ID: HD-MW-12-0/1-0

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 10.0000

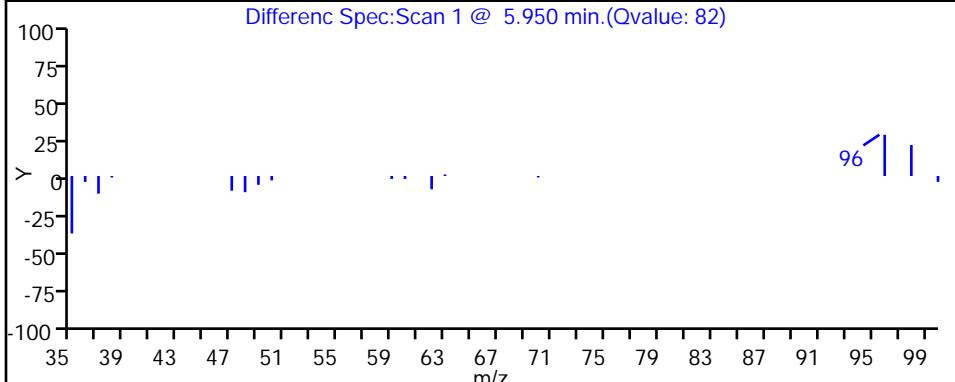
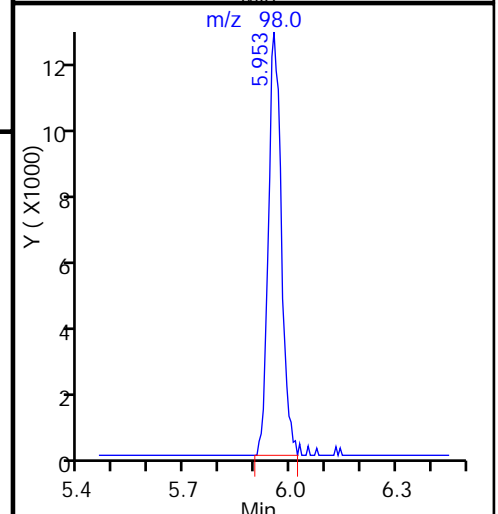
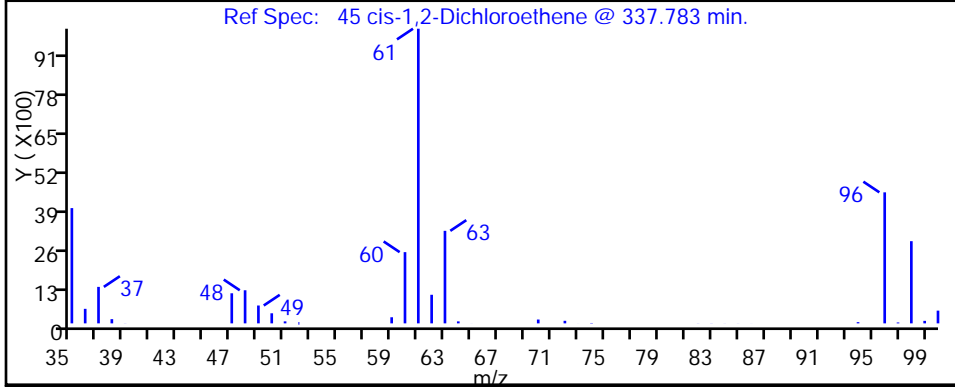
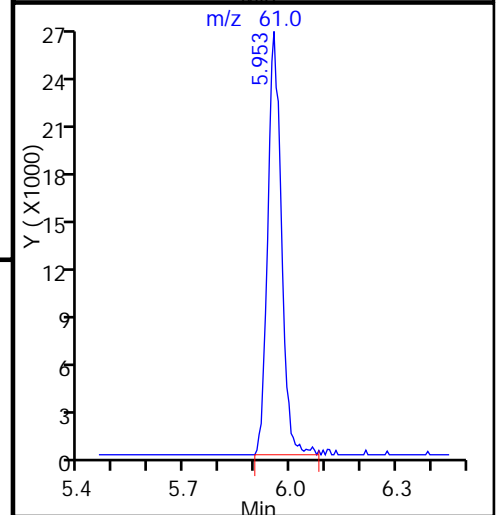
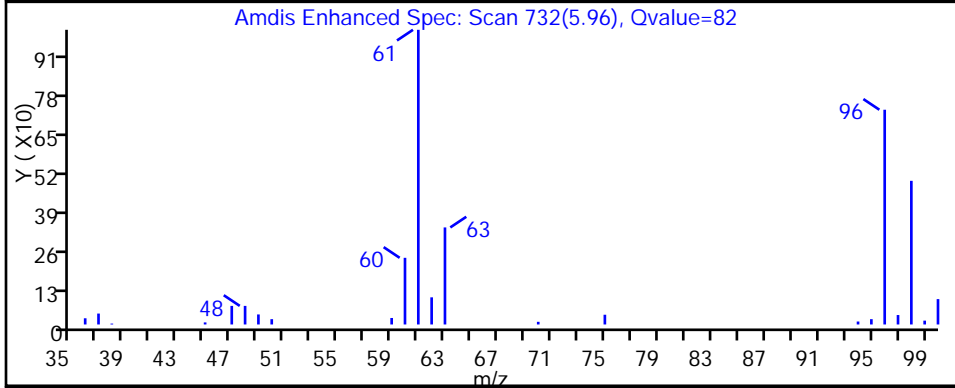
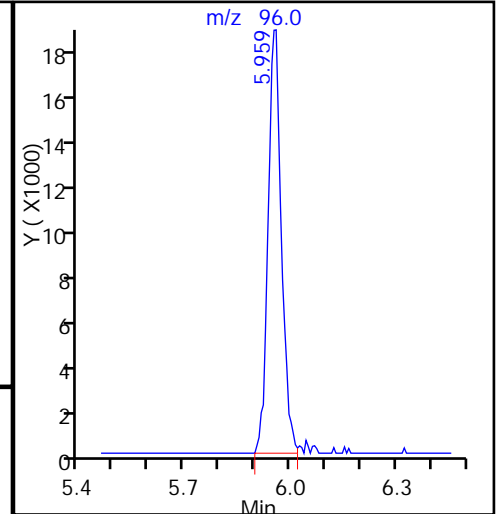
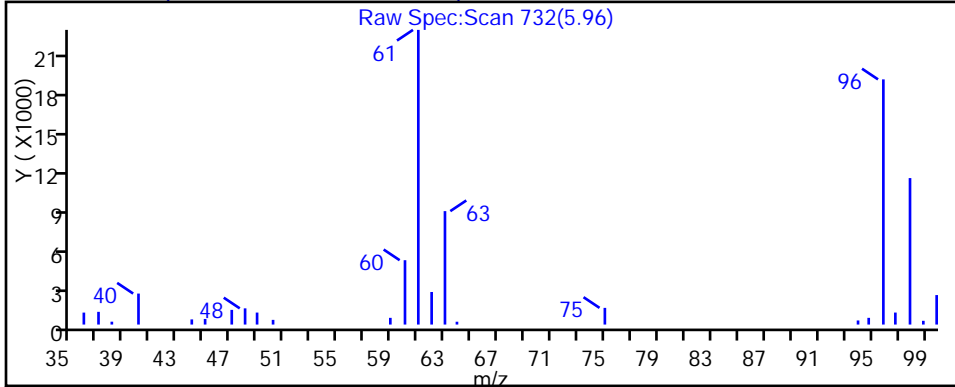
Method: MSVOA\_LL\_CHHP5

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\20151001-8778.b\51001015.D

Injection Date: 01-Oct-2015 18:12:30

Instrument ID: CHHP5

Lims ID: 180-48019-B-3

Lab Sample ID: 180-48019-3

Client ID: HD-MW-12-0/1-0

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 10.0000

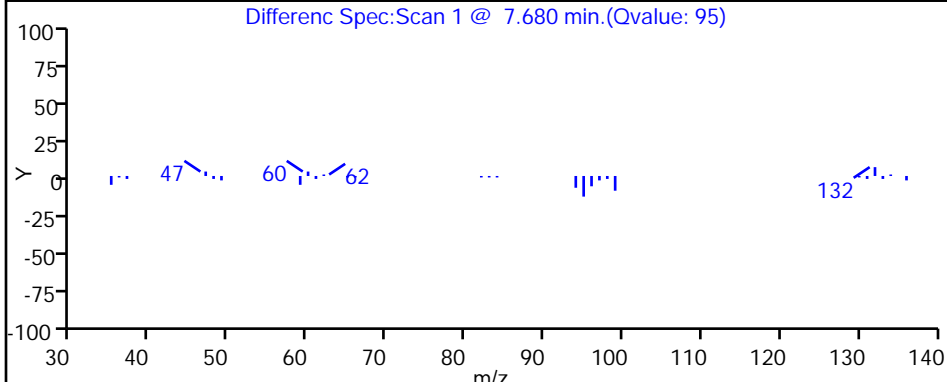
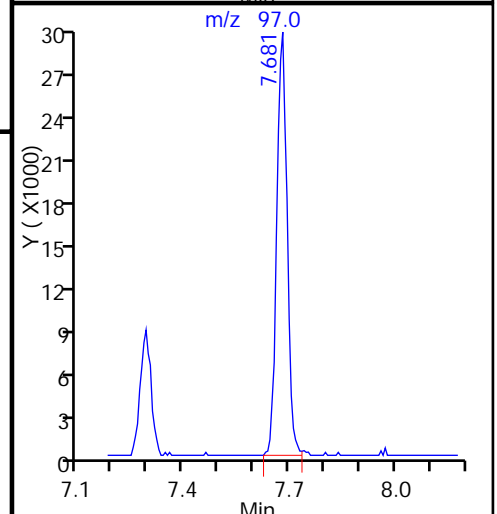
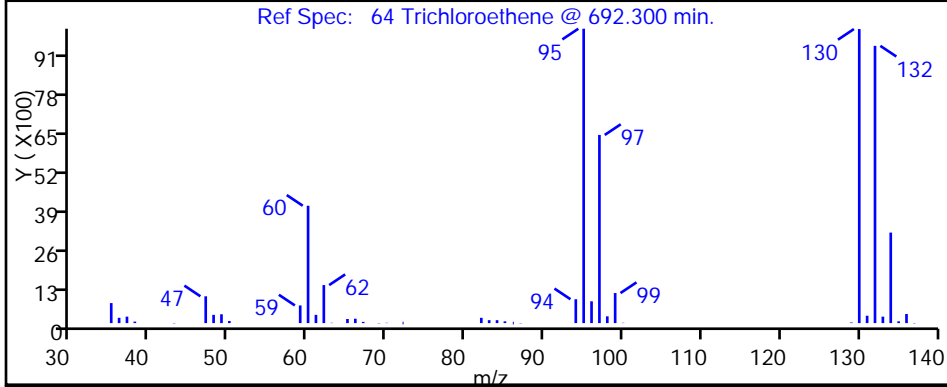
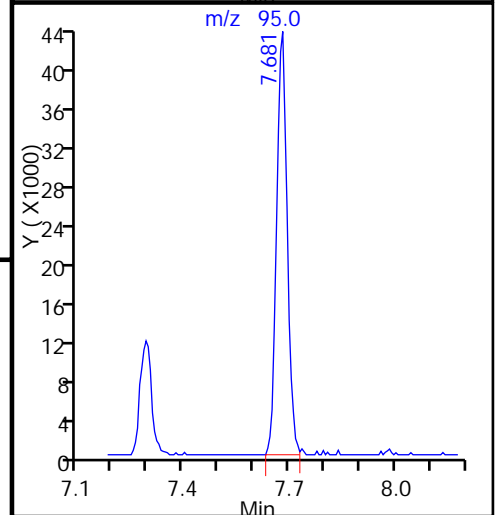
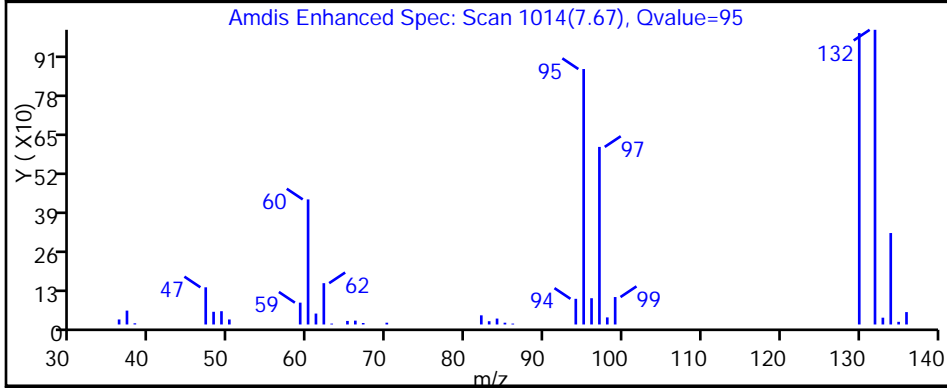
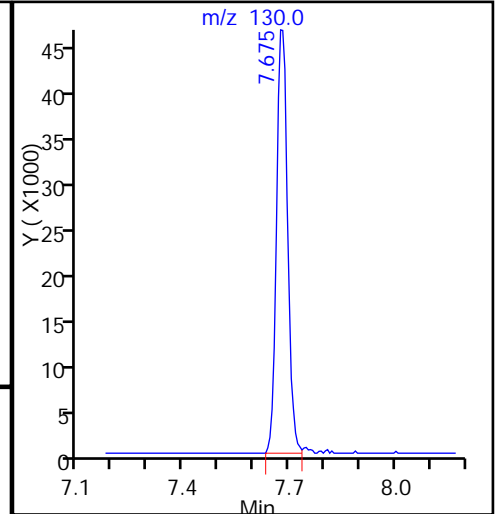
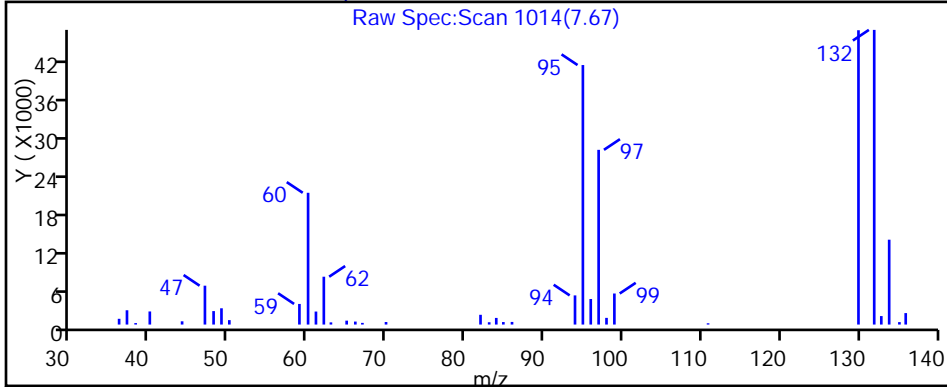
Method: MSVOA\_LL\_CHHP5

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\20151001-8778.b\51001015.D

Injection Date: 01-Oct-2015 18:12:30

Instrument ID: CHHP5

Lims ID: 180-48019-B-3

Lab Sample ID: 180-48019-3

Client ID: HD-MW-12-0/1-0

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 10.0000

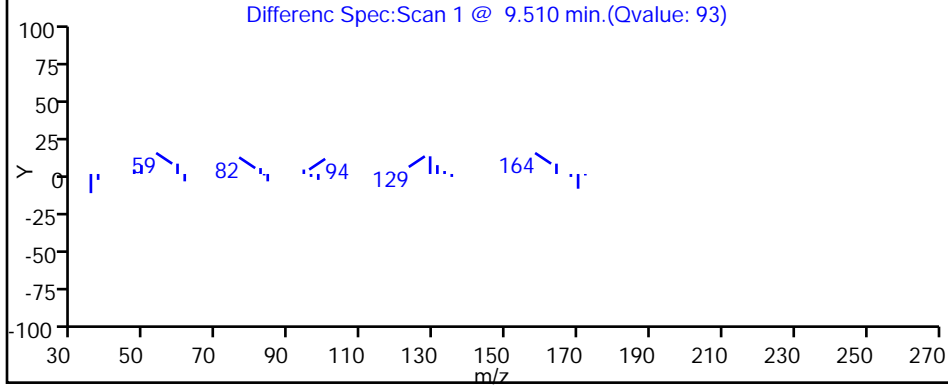
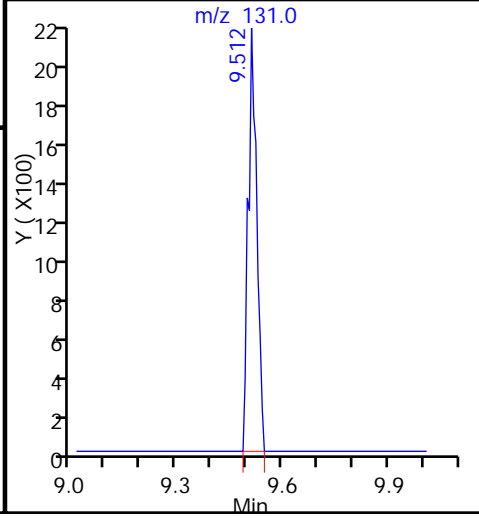
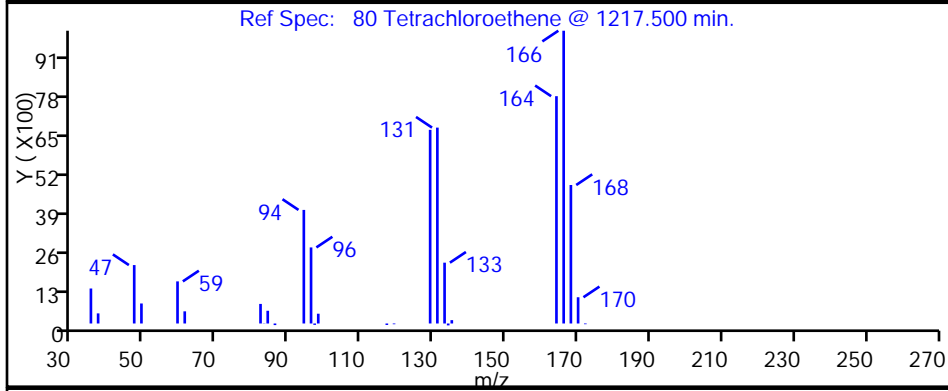
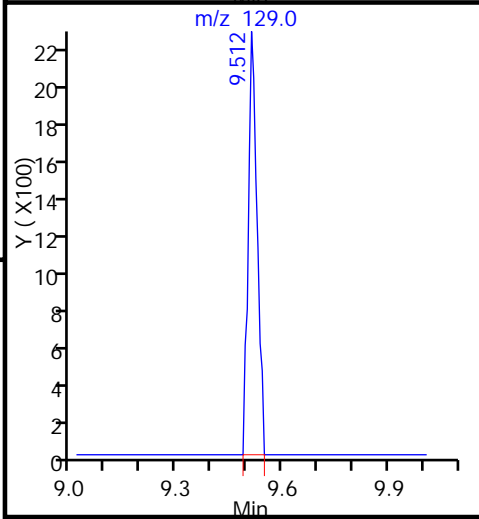
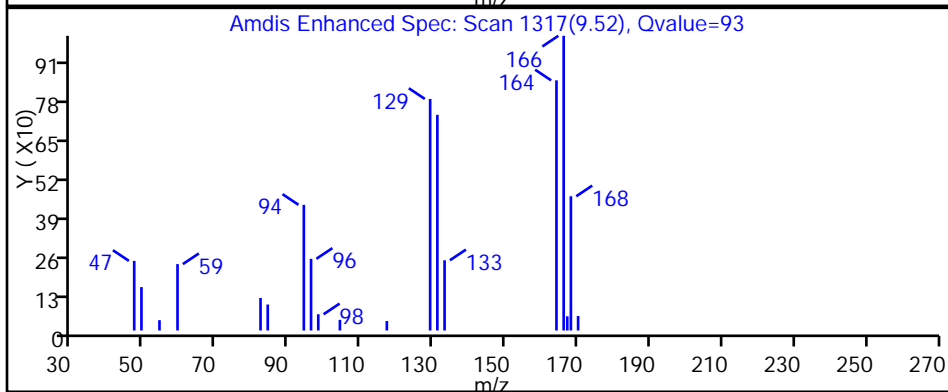
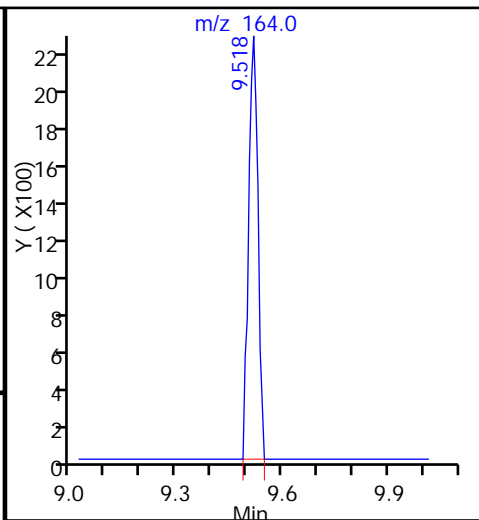
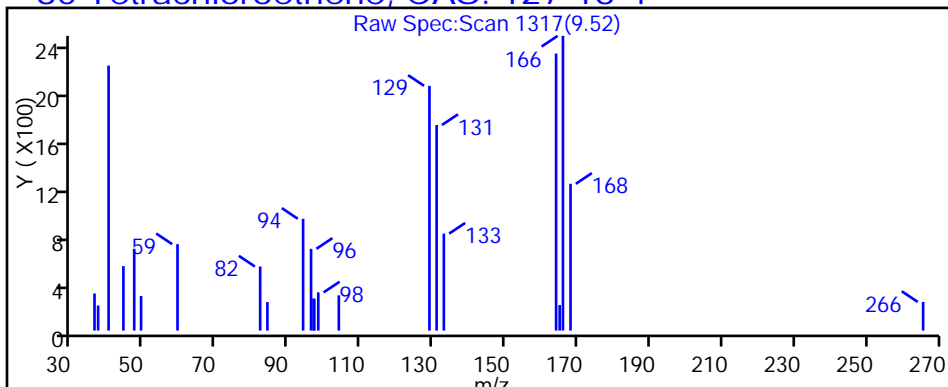
Method: MSVOA\_LL\_CHHP5

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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-9-0/1-0 Lab Sample ID: 180-48019-4  
 Matrix: Water Lab File ID: 51001016.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 12:40  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 18:36  
 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.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	5.0		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	36		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND		5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	29		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND	^c	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-MW-9-0/1-0 Lab Sample ID: 180-48019-4  
 Matrix: Water Lab File ID: 51001016.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 12:40  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 18:36  
 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.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	95		71-118
460-00-4	4-Bromofluorobenzene (Surr)	87		70-118
1868-53-7	Dibromofluoromethane (Surr)	108		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001016.D  
 Lims ID: 180-48019-A-4 Lab Sample ID: 180-48019-4  
 Client ID: HD-MW-9-0/1-0  
 Sample Type: Client  
 Inject. Date: 01-Oct-2015 18:36:30 ALS Bottle#: 13 Worklist Smp#: 16  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-48019-A-4  
 Misc. Info.: 180-0008778-016  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 02-Oct-2015 07:45:41 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 02-Oct-2015 07:45:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.268	4.278	-0.010	0	119916	1000.0	
* 2 Fluorobenzene (IS)	96	7.291	7.289	0.002	98	300527	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.386	0.002	87	73960	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.728	0.002	96	107861	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.561	6.559	0.002	93	79810	54.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.938	6.936	0.002	0	96627	47.7	
\$ 7 Toluene-d8 (Surr)	98	8.934	8.938	-0.004	94	272287	47.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.574	11.572	0.002	91	93449	43.4	
12 Chloromethane	50		1.759				ND	
13 Vinyl chloride	62	1.907	1.905	0.002	98	55116	24.9	
15 Bromomethane	94		2.234				ND	
16 Chloroethane	64		2.386				ND	
22 1,1-Dichloroethene	96		3.347				ND	
24 Acetone	43		3.438				ND	
26 Carbon disulfide	76		3.633				ND	
31 Methylene Chloride	84		4.138				ND	
33 Acrylonitrile	53		4.521				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73	4.578	4.576	0.002	73	2535	0.6026	
37 1,1-Dichloroethane	63		5.196				ND	
45 cis-1,2-Dichloroethene	96	5.953	5.951	0.002	82	348855	179.7	
46 2-Butanone (MEK)	43		5.957				ND	
49 Chlorobromomethane	128		6.231				ND	
52 Chloroform	83		6.383				ND	
53 1,1,1-Trichloroethane	97		6.541				ND	
56 Carbon tetrachloride	117		6.711				ND	
58 Benzene	78		6.942				ND	
59 1,2-Dichloroethane	62		7.022				ND	
64 Trichloroethene	130	7.680	7.679	0.001	96	265515	146.5	
67 1,2-Dichloropropane	63		7.952				ND	
70 1,4-Dioxane	88		8.025				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.232				ND	
74 cis-1,3-Dichloropropene	75		8.676				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		9.005				ND	
77 trans-1,3-Dichloropropene	75		9.254				ND	
79 1,1,2-Trichloroethane	97		9.449				ND	
80 Tetrachloroethene	164	9.518	9.516	0.002	18	880	0.6191	M
82 2-Hexanone	43		9.656				ND	
84 Chlorodibromomethane	129		9.814				ND	
85 Ethylene Dibromide	107		9.929				ND	
87 Chlorobenzene	112		10.416				ND	
89 1,1,1,2-Tetrachloroethane	131		10.507				ND	
90 Ethylbenzene	106		10.513				ND	
91 m-Xylene & p-Xylene	106		10.647				ND	
92 o-Xylene	106		11.031				ND	
93 Styrene	104		11.049				ND	
94 Bromoform	173		11.231				ND	
99 1,1,2,2-Tetrachloroethane	83		11.706				ND	
S 133 Xylenes, Total	106		1.000				ND	

### QC Flag Legend

Review Flags

M - Manually Integrated

### Reagents:

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001016.D

Injection Date: 01-Oct-2015 18:36:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-A-4

Lab Sample ID: 180-48019-4

Worklist Smp#: 16

Client ID: HD-MW-9-0/1-0

Purge Vol: 5.000 mL

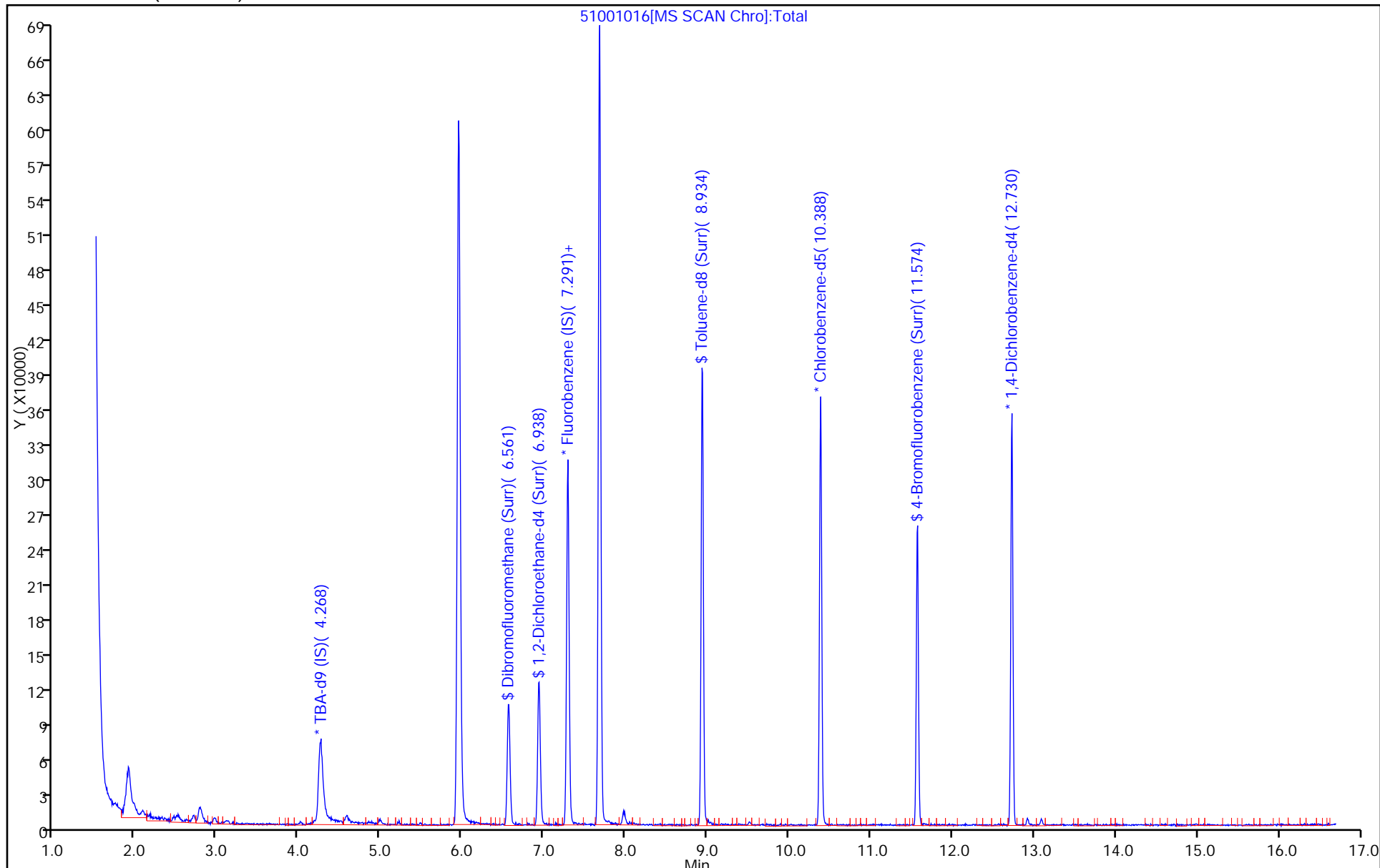
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001016.D

Injection Date: 01-Oct-2015 18:36:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-4

Lab Sample ID: 180-48019-4

Client ID: HD-MW-9-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

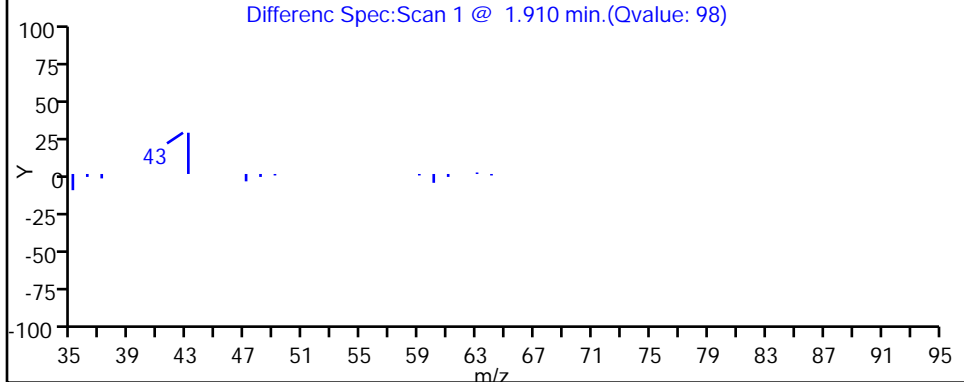
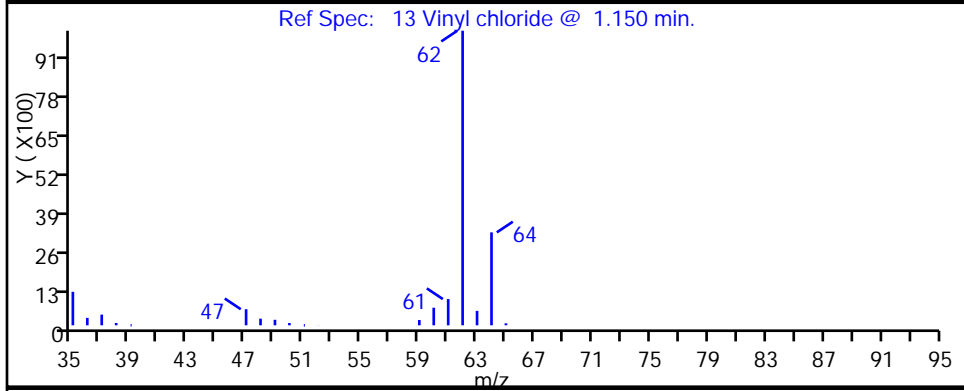
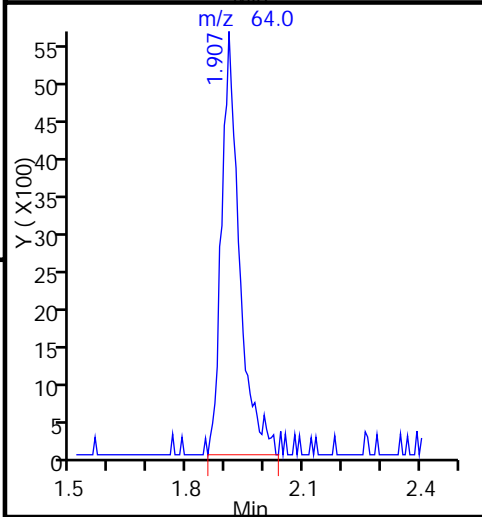
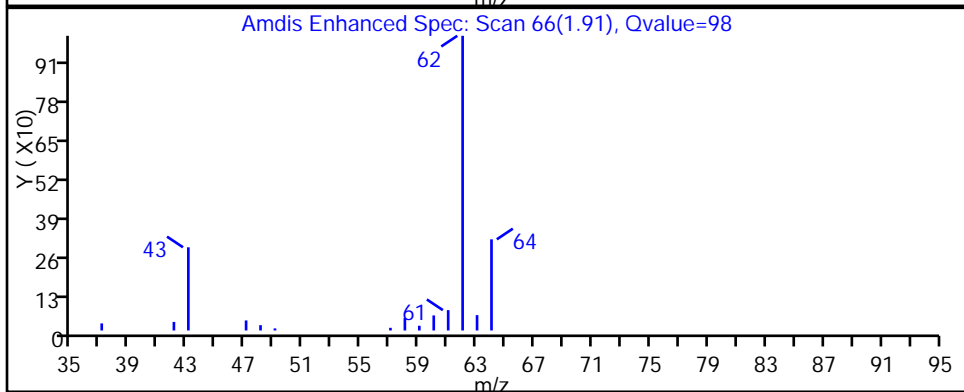
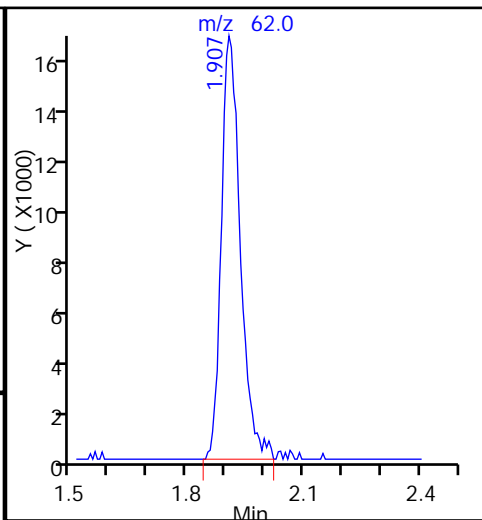
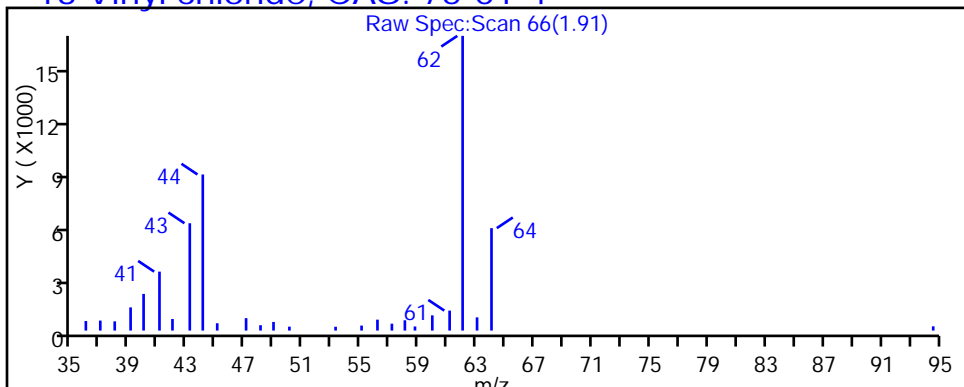
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

13 Vinyl chloride, CAS: 75-01-4



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001016.D

Injection Date: 01-Oct-2015 18:36:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-4

Lab Sample ID: 180-48019-4

Client ID: HD-MW-9-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

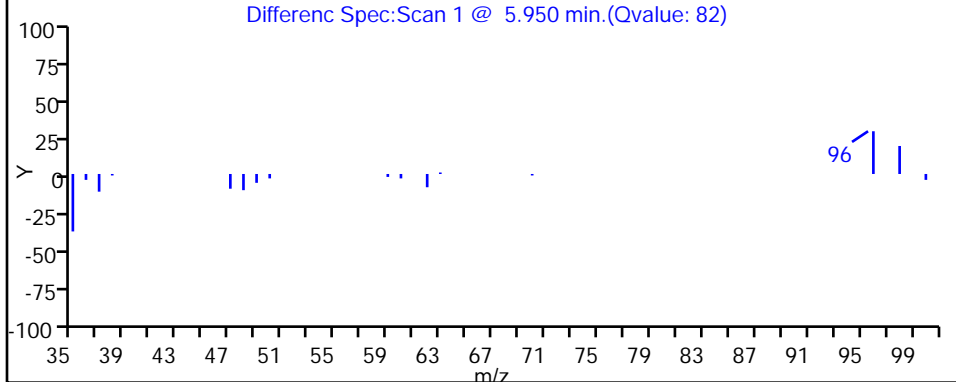
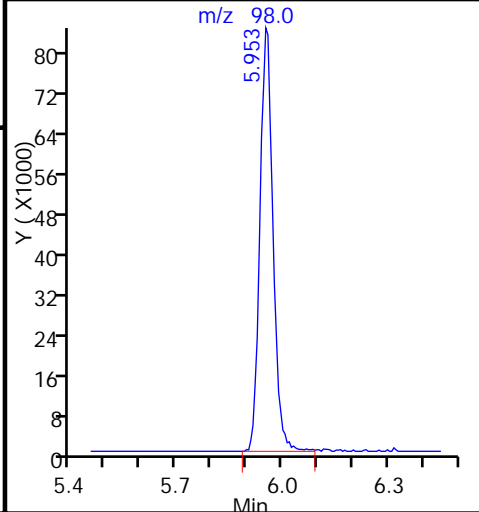
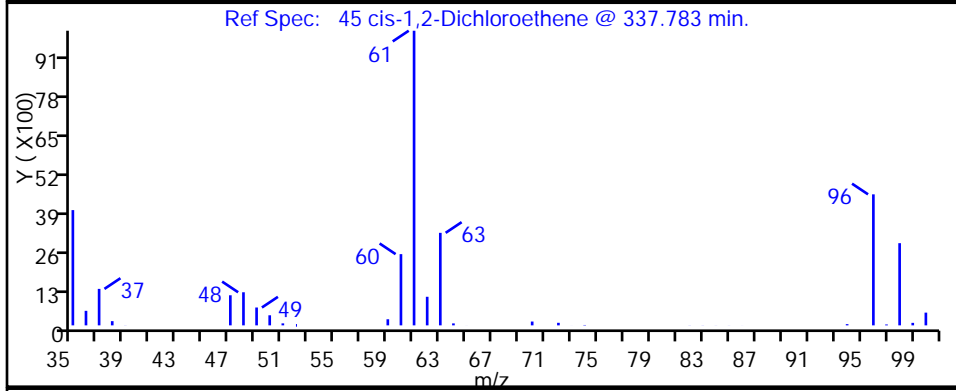
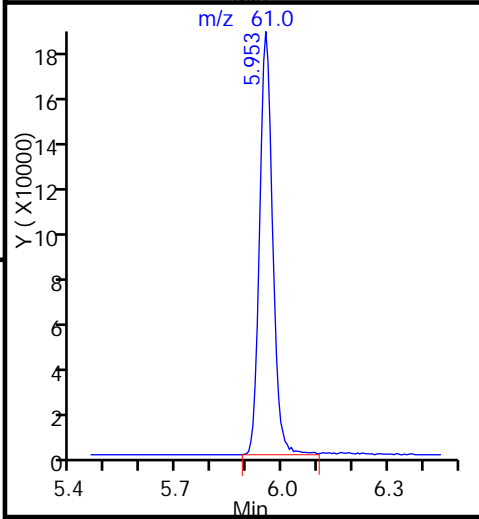
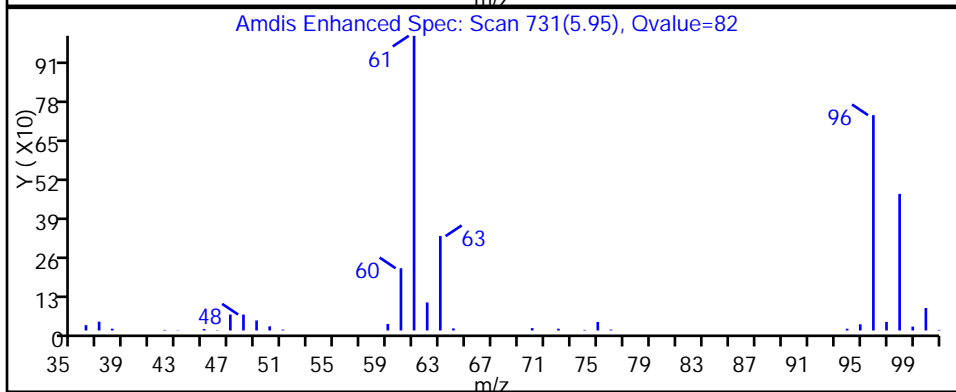
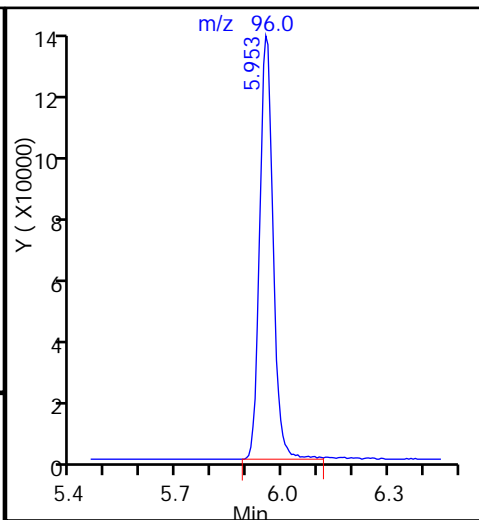
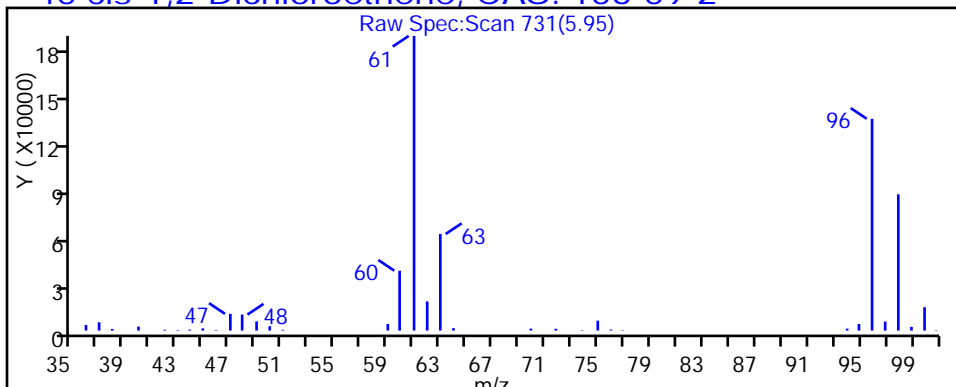
Method: MSVOA\_LL\_CHHP5

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\20151001-8778.b\51001016.D

Injection Date: 01-Oct-2015 18:36:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-4

Lab Sample ID: 180-48019-4

Client ID: HD-MW-9-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

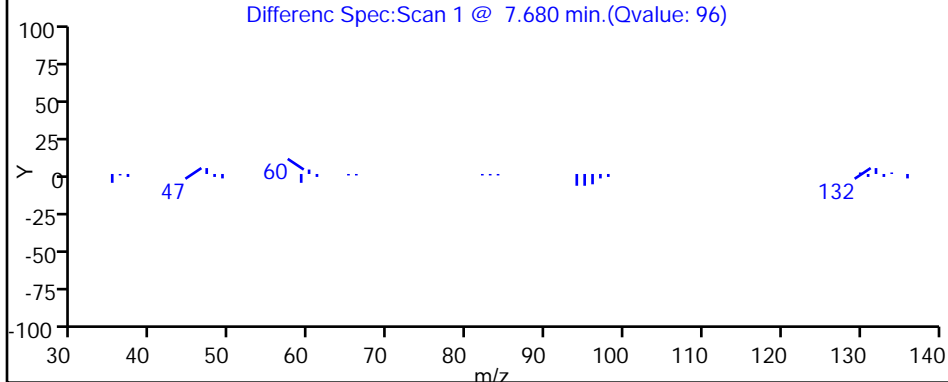
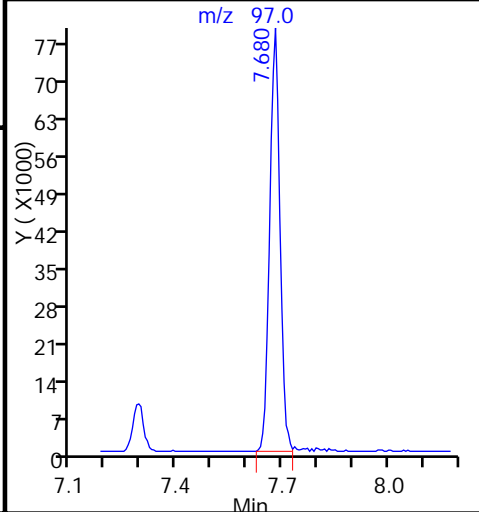
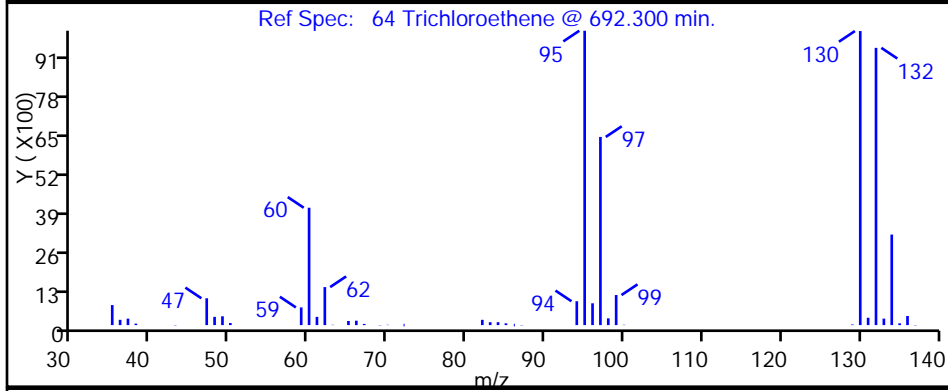
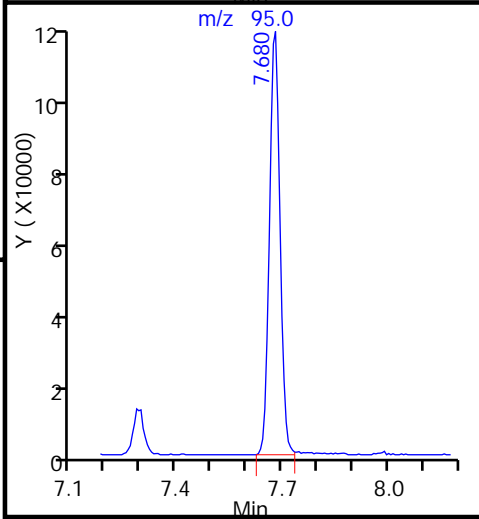
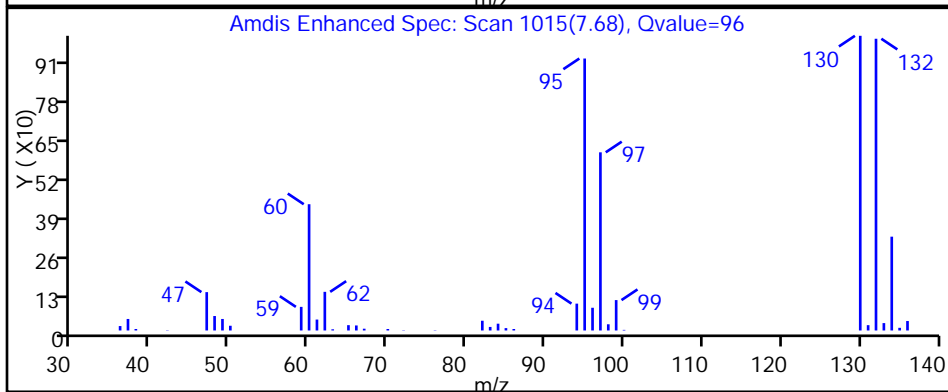
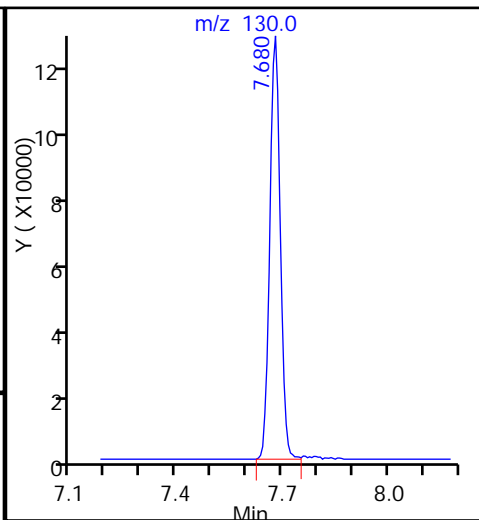
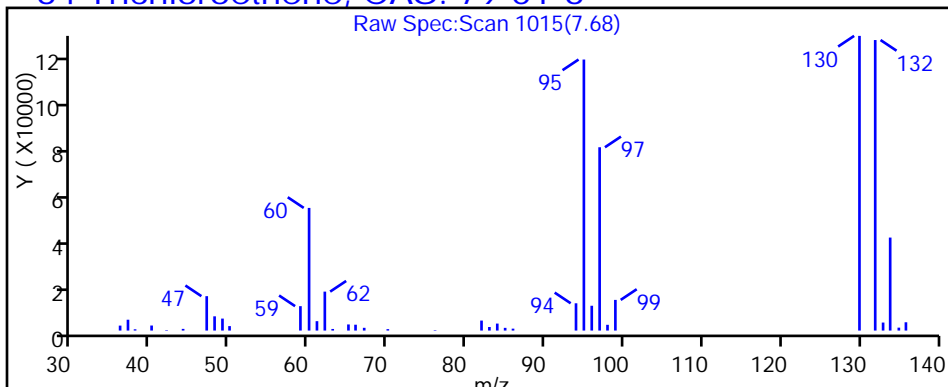
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



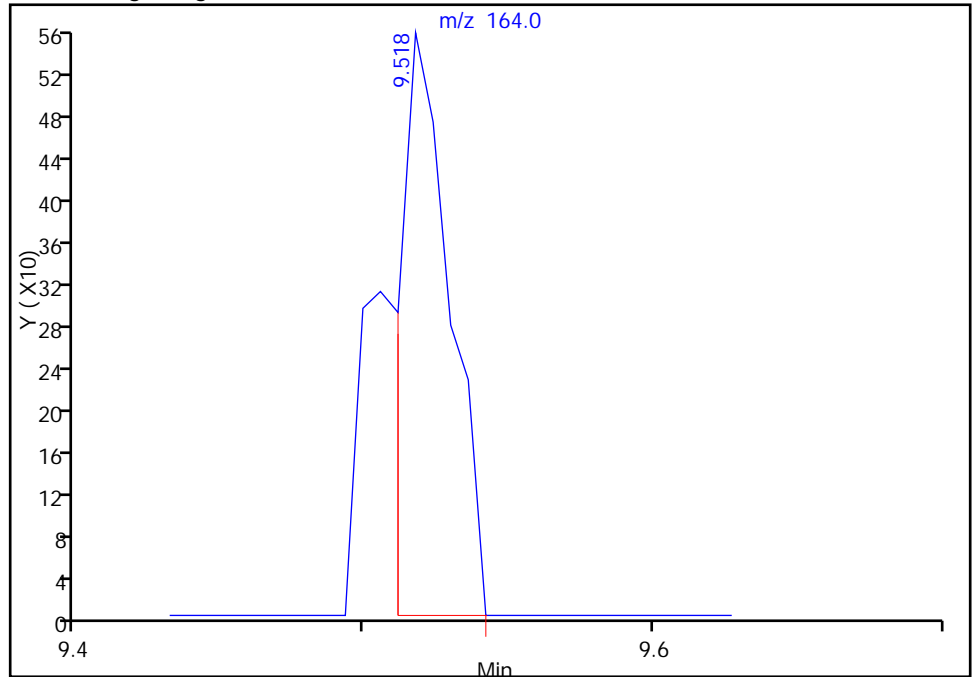
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001016.D  
Injection Date: 01-Oct-2015 18:36:30 Instrument ID: CHHP5  
Lims ID: 180-48019-A-4 Lab Sample ID: 180-48019-4  
Client ID: HD-MW-9-0/1-0  
Operator ID: 001562 ALS Bottle#: 13 Worklist Smp#: 16  
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

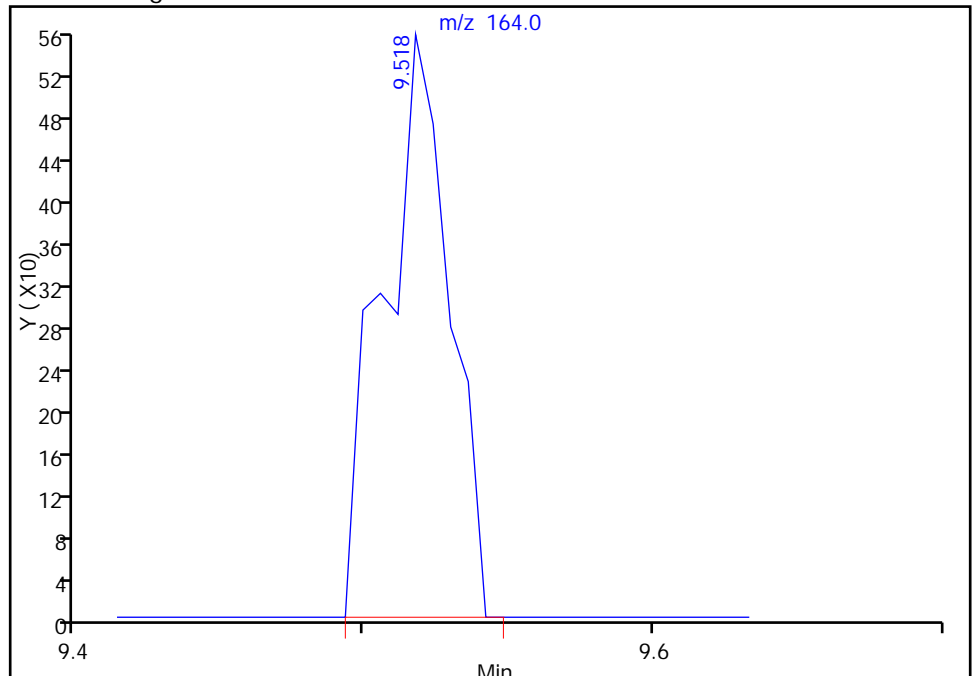
RT: 9.52  
Area: 661  
Amount: 0.465061  
Amount Units: ng

Processing Integration Results



RT: 9.52  
Area: 880  
Amount: 0.619143  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 02-Oct-2015 07:45:41  
Audit Action: Manually Integrated  
Audit Reason: Incomplete Integration

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC6-0/1-2 Lab Sample ID: 180-48019-5  
 Matrix: Water Lab File ID: 50930014.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 12:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 16:39  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND	^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC6-0/1-2 Lab Sample ID: 180-48019-5  
 Matrix: Water Lab File ID: 50930014.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 12:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 16:39  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	91		70-118
1868-53-7	Dibromofluoromethane (Surr)	109		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930014.D  
 Lims ID: 180-48019-A-5 Lab Sample ID: 180-48019-5  
 Client ID: HD-QC6-0/1-2  
 Sample Type: Client  
 Inject. Date: 30-Sep-2015 16:39:30 ALS Bottle#: 14 Worklist Smp#: 14  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-48019-A-5  
 Misc. Info.: 180-0008759-014  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 08:43:14 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 08:43:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.262	4.273	-0.011	0	122069	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.290	0.002	98	302991	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.387	0.001	87	77326	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.729	0.001	95	114556	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.562	6.560	0.002	94	81436	54.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.939	6.932	0.007	0	101586	49.7	
\$ 7 Toluene-d8 (Surr)	98	8.940	8.933	0.007	94	290192	48.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.575	11.573	0.002	90	102022	45.3	
12 Chloromethane	50		1.773				ND	
13 Vinyl chloride	62		1.907				ND	
15 Bromomethane	94		2.241				ND	
16 Chloroethane	64		2.393				ND	
22 1,1-Dichloroethene	96		3.342				ND	
24 Acetone	43	3.435	3.446	-0.011	64	3200	5.23	
26 Carbon disulfide	76		3.628				ND	
31 Methylene Chloride	84		4.139				ND	
33 Acrylonitrile	53		4.522				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.577				ND	
37 1,1-Dichloroethane	63		5.198				ND	
45 cis-1,2-Dichloroethene	96		5.946				ND	
46 2-Butanone (MEK)	43		5.958				ND	
49 Chlorobromomethane	128		6.232				ND	
52 Chloroform	83		6.384				ND	
53 1,1,1-Trichloroethane	97		6.536				ND	
56 Carbon tetrachloride	117		6.713				ND	
58 Benzene	78		6.944				ND	
59 1,2-Dichloroethane	62		7.023				ND	
64 Trichloroethene	130		7.674				ND	
67 1,2-Dichloropropane	63		7.947				ND	
70 1,4-Dioxane	88		8.027				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.227				ND	
74 cis-1,3-Dichloropropene	75		8.671				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.830				ND	
76 Toluene	91		9.000				ND	
77 trans-1,3-Dichloropropene	75		9.249				ND	
79 1,1,2-Trichloroethane	97		9.450				ND	
80 Tetrachloroethene	164		9.517				ND	
82 2-Hexanone	43		9.657				ND	
84 Chlorodibromomethane	129		9.815				ND	
85 Ethylene Dibromide	107		9.931				ND	
87 Chlorobenzene	112		10.417				ND	
89 1,1,1,2-Tetrachloroethane	131		10.509				ND	
90 Ethylbenzene	106		10.515				ND	
91 m-Xylene & p-Xylene	106		10.649				ND	
92 o-Xylene	106		11.026				ND	
93 Styrene	104		11.044				ND	
94 Bromoform	173		11.233				ND	
99 1,1,2,2-Tetrachloroethane	83		11.707				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930014.D

Injection Date: 30-Sep-2015 16:39:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-A-5

Lab Sample ID: 180-48019-5

Worklist Smp#: 14

Client ID: HD-QC6-0/1-2

Purge Vol: 5.000 mL

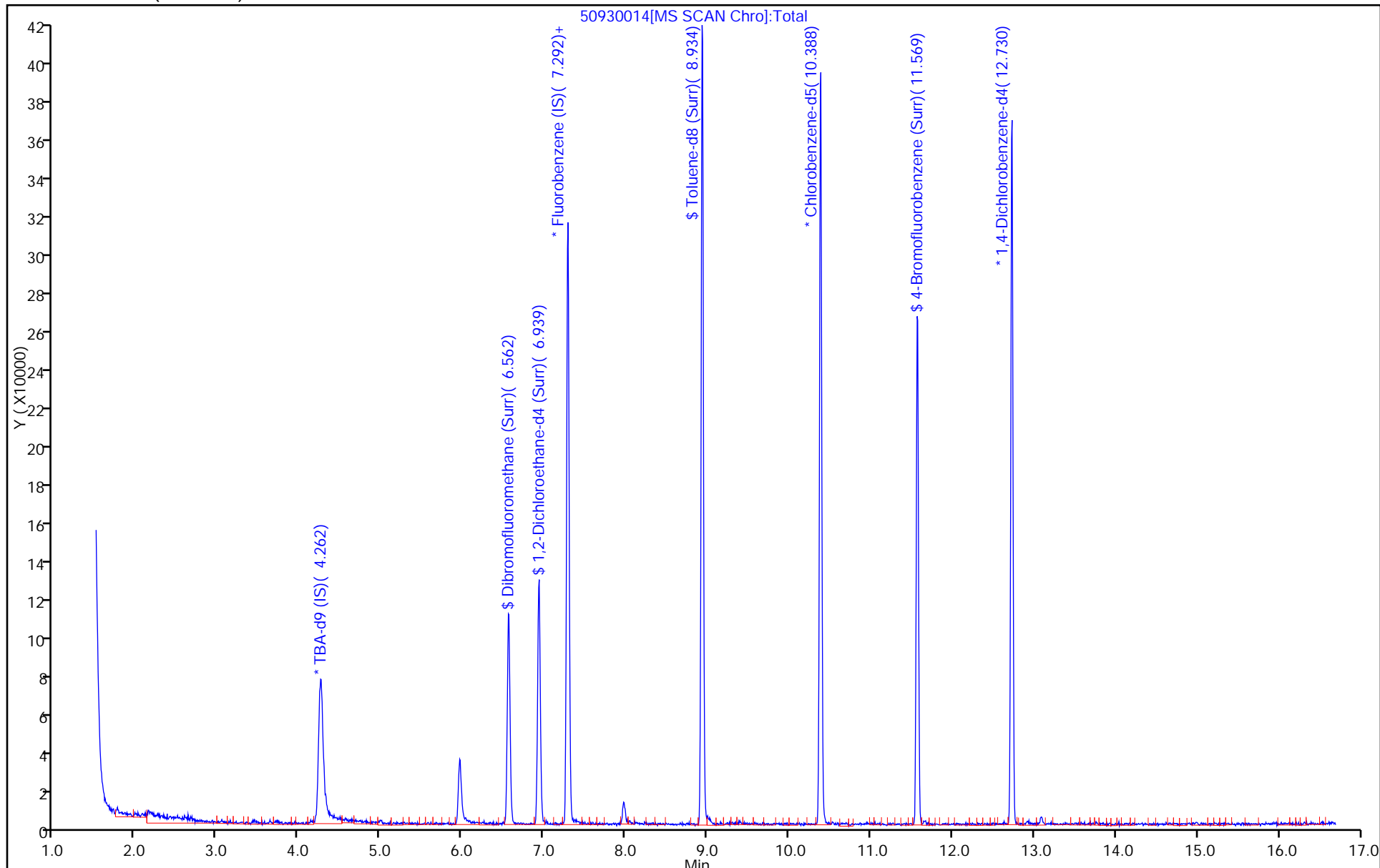
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC2-0/1-3 Lab Sample ID: 180-48019-6  
 Matrix: Water Lab File ID: 50930021.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 15:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 19:28  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	12		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	2.5	J ^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC2-0/1-3 Lab Sample ID: 180-48019-6  
 Matrix: Water Lab File ID: 50930021.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 15:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 19:28  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		64-135
2037-26-5	Toluene-d8 (Surr)	93		71-118
460-00-4	4-Bromofluorobenzene (Surr)	89		70-118
1868-53-7	Dibromofluoromethane (Surr)	109		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930021.D  
 Lims ID: 180-48019-A-6 Lab Sample ID: 180-48019-6  
 Client ID: HD-QC2-0/1-3  
 Sample Type: Client  
 Inject. Date: 30-Sep-2015 19:28:30 ALS Bottle#: 21 Worklist Smp#: 21  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-48019-A-6  
 Misc. Info.: 180-0008759-021  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 08:55:39 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 08:55:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.261	4.273	-0.012	0	107639	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.290	0.000	98	305290	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.387	0.000	87	76688	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.729	12.729	0.000	96	110311	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.566	6.560	0.006	94	81467	54.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.932	0.005	0	101998	49.5	
\$ 7 Toluene-d8 (Surr)	98	8.933	8.933	0.000	94	274172	46.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.567	11.573	-0.006	91	98806	44.3	
12 Chloromethane	50		1.773				ND	
13 Vinyl chloride	62		1.907				ND	
15 Bromomethane	94		2.241				ND	
16 Chloroethane	64		2.393				ND	
22 1,1-Dichloroethene	96		3.342				ND	
24 Acetone	43	3.452	3.446	0.006	97	36831	59.8	
26 Carbon disulfide	76		3.628				ND	
31 Methylene Chloride	84		4.139				ND	
33 Acrylonitrile	53		4.522				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.577				ND	
37 1,1-Dichloroethane	63		5.198				ND	
45 cis-1,2-Dichloroethene	96		5.946				ND	
46 2-Butanone (MEK)	43	5.958	5.958	0.000	40	11638	12.6	
49 Chlorobromomethane	128		6.232				ND	
52 Chloroform	83		6.384				ND	
53 1,1,1-Trichloroethane	97		6.536				ND	
56 Carbon tetrachloride	117		6.713				ND	
58 Benzene	78		6.944				ND	
59 1,2-Dichloroethane	62		7.023				ND	
64 Trichloroethene	130		7.674				ND	
67 1,2-Dichloropropane	63		7.947				ND	
70 1,4-Dioxane	88		8.027				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.227				ND	
74 cis-1,3-Dichloropropene	75		8.671				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.830				ND	
76 Toluene	91		9.000				ND	
77 trans-1,3-Dichloropropene	75		9.249				ND	
79 1,1,2-Trichloroethane	97		9.450				ND	
80 Tetrachloroethene	164	9.511	9.517	-0.006	7	448	0.3040	
82 2-Hexanone	43		9.657				ND	
84 Chlorodibromomethane	129		9.815				ND	
85 Ethylene Dibromide	107		9.931				ND	
87 Chlorobenzene	112		10.417				ND	
89 1,1,1,2-Tetrachloroethane	131		10.509				ND	
90 Ethylbenzene	106		10.515				ND	
91 m-Xylene & p-Xylene	106		10.649				ND	
92 o-Xylene	106		11.026				ND	
93 Styrene	104		11.044				ND	
94 Bromoform	173		11.233				ND	
99 1,1,2,2-Tetrachloroethane	83		11.707				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930021.D

Injection Date: 30-Sep-2015 19:28:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-A-6

Lab Sample ID: 180-48019-6

Worklist Smp#: 21

Client ID: HD-QC2-0/1-3

Purge Vol: 5.000 mL

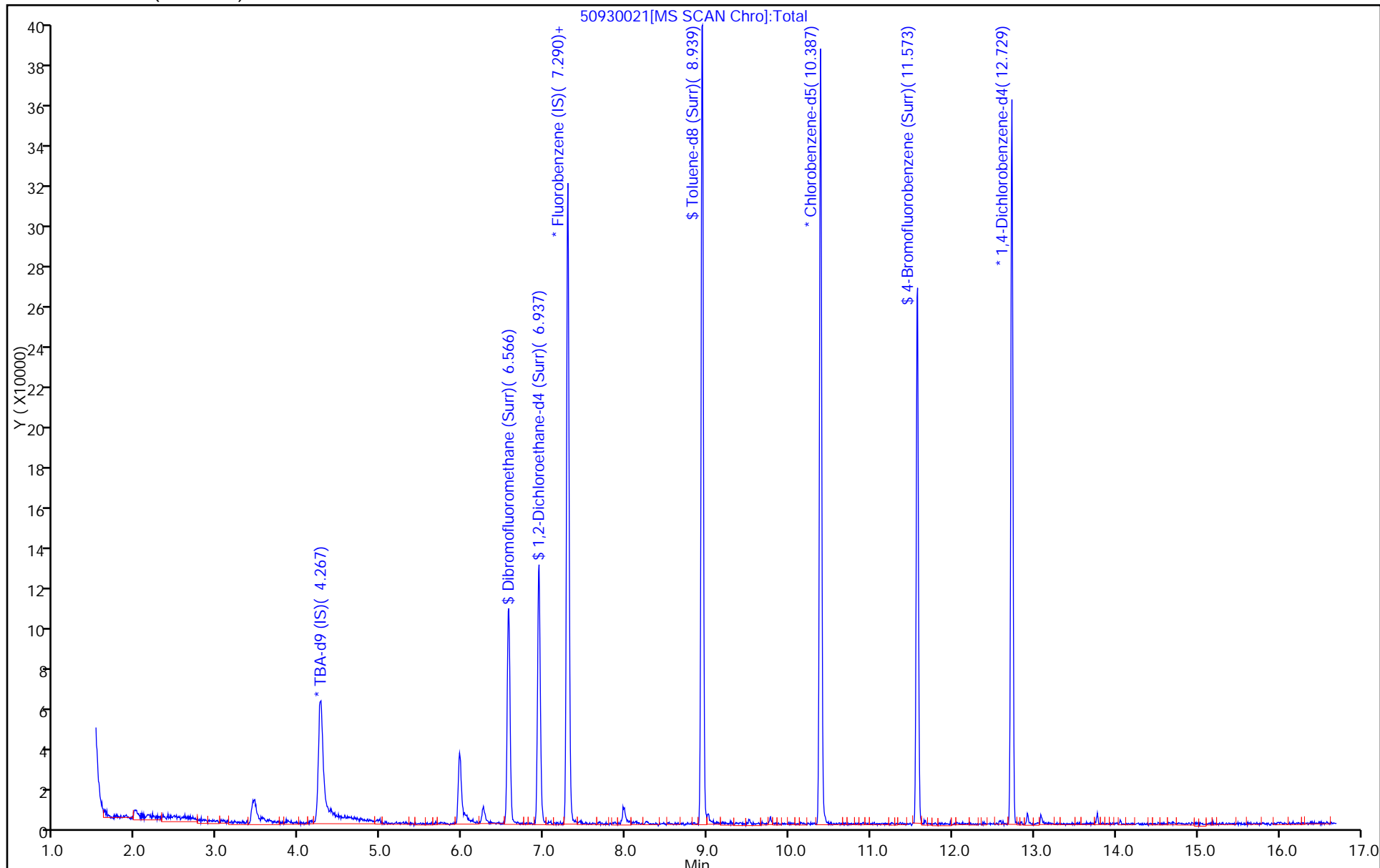
Dil. Factor: 1.0000

ALS Bottle#: 21

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930021.D

Injection Date: 30-Sep-2015 19:28:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-6

Lab Sample ID: 180-48019-6

Client ID: HD-QC2-0/1-3

Operator ID: 001562

ALS Bottle#: 21 Worklist Smp#: 21

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

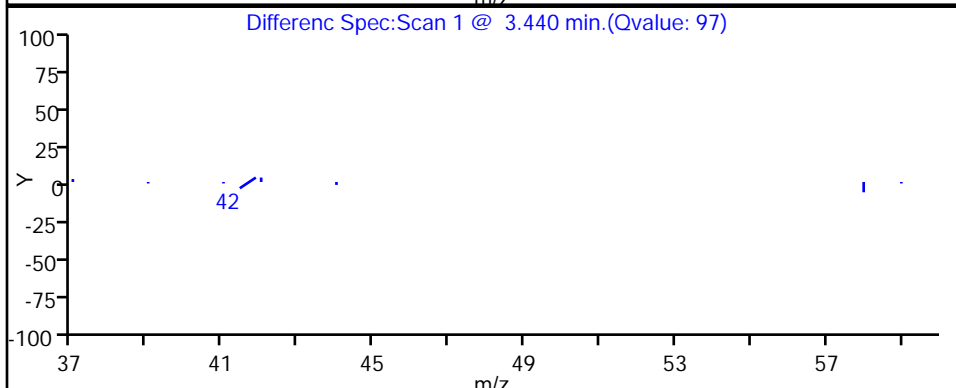
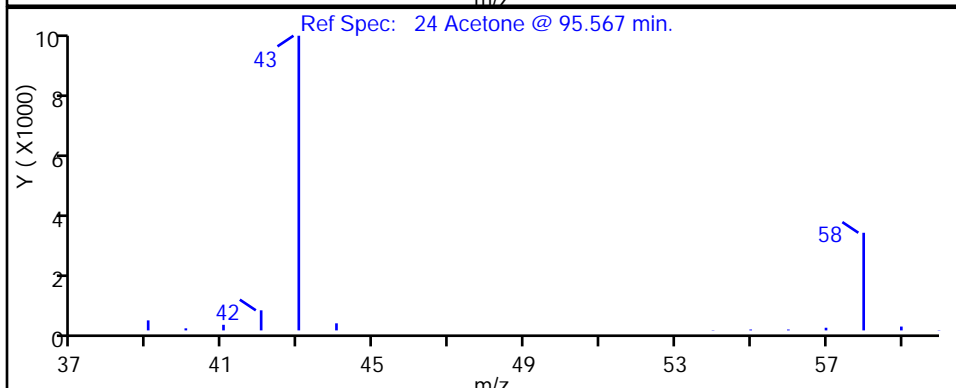
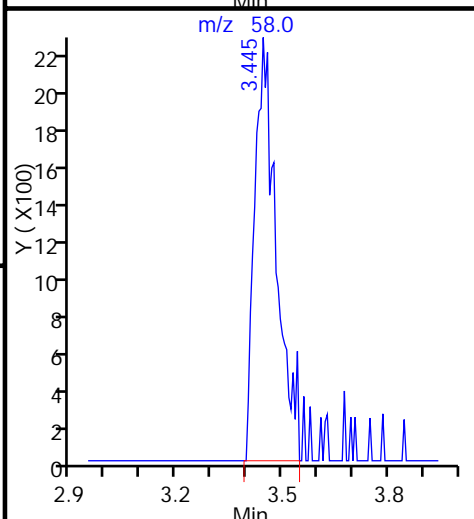
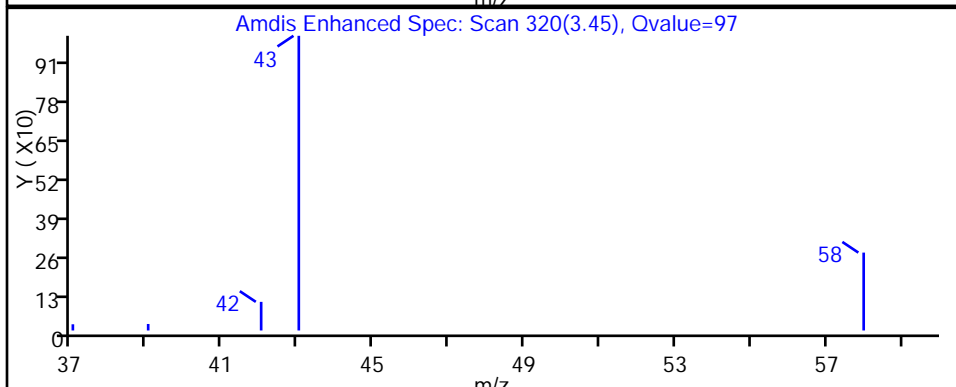
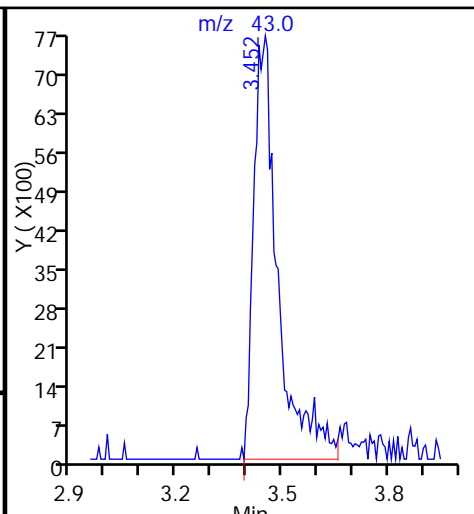
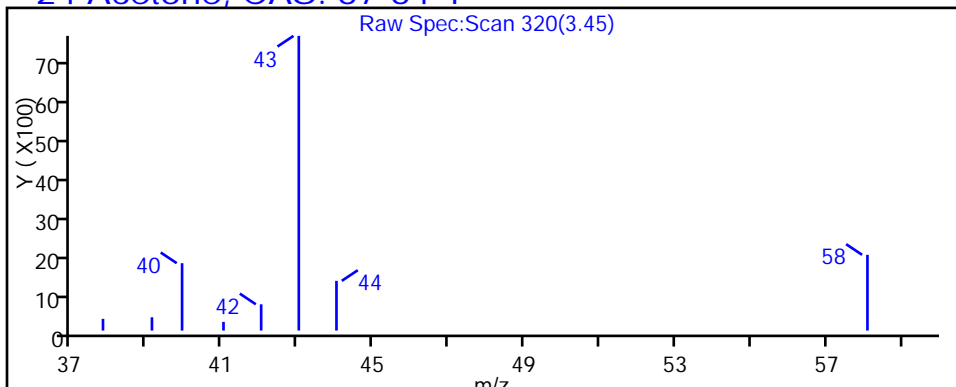
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930021.D

Injection Date: 30-Sep-2015 19:28:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-6

Lab Sample ID: 180-48019-6

Client ID: HD-QC2-0/1-3

Operator ID: 001562

ALS Bottle#: 21 Worklist Smp#: 21

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

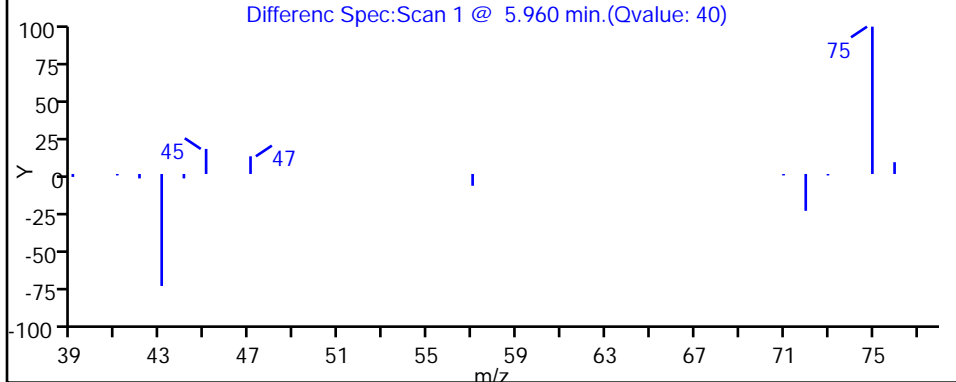
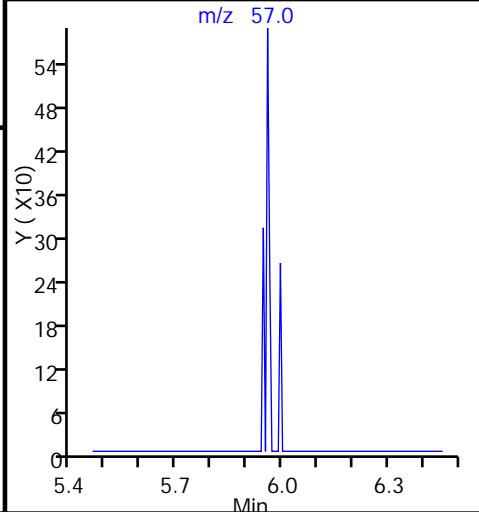
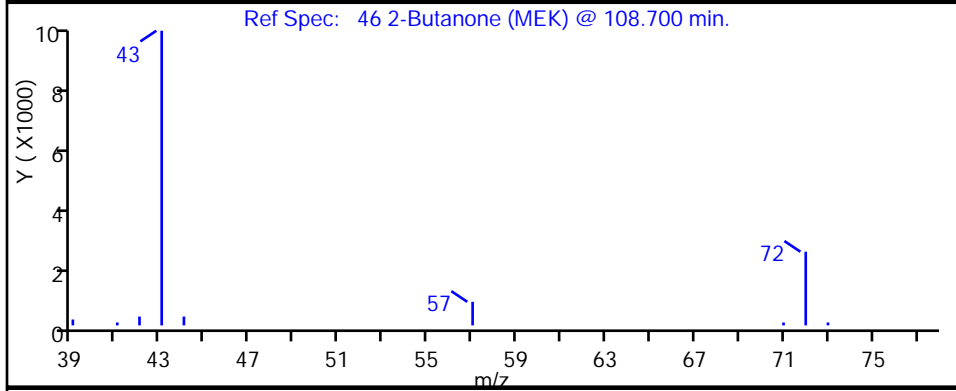
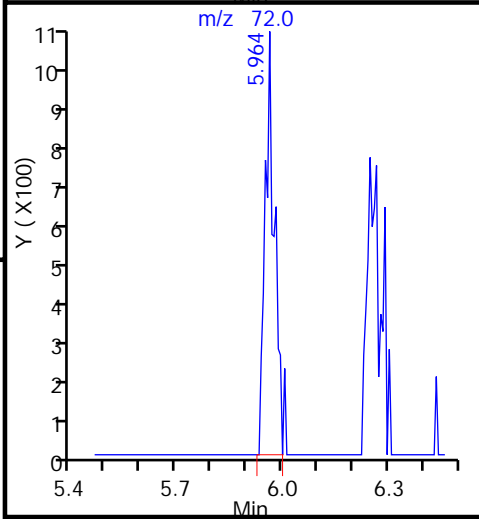
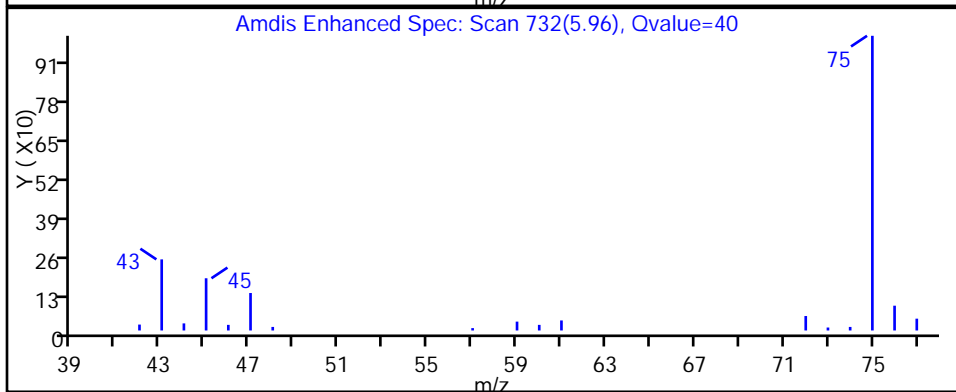
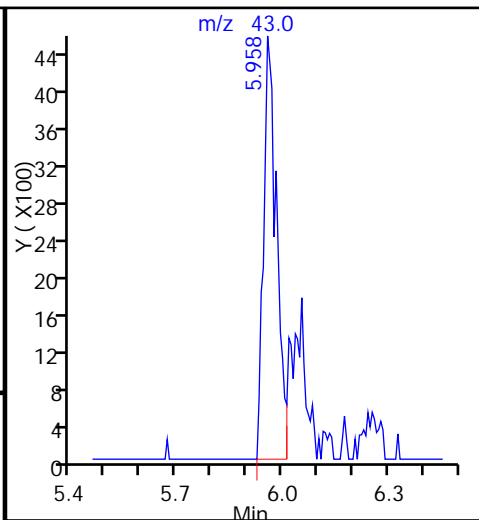
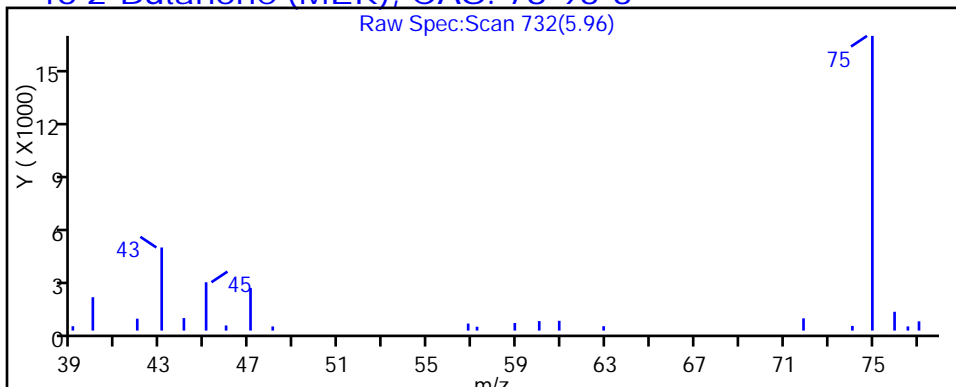
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

46 2-Butanone (MEK), CAS: 78-93-3





FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC2-0/1-4 Lab Sample ID: 180-48019-7  
 Matrix: Water Lab File ID: 50930020.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 15:05  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 19:04  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	12		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	2.1	J ^c	5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND	^c	5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC2-0/1-4 Lab Sample ID: 180-48019-7  
 Matrix: Water Lab File ID: 50930020.D  
 Analysis Method: 8260C Date Collected: 09/22/2015 15:05  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 19:04  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	93		71-118
460-00-4	4-Bromofluorobenzene (Surr)	89		70-118
1868-53-7	Dibromofluoromethane (Surr)	106		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930020.D  
 Lims ID: 180-48019-A-7 Lab Sample ID: 180-48019-7  
 Client ID: HD-QC2-0/1-4  
 Sample Type: Client  
 Inject. Date: 30-Sep-2015 19:04:30 ALS Bottle#: 20 Worklist Smp#: 20  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-48019-A-7  
 Misc. Info.: 180-0008759-020  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 08:54:47 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 08:54:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.266	4.273	-0.007	0	112410	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.290	0.000	98	313314	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.387	-0.001	88	78248	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.729	-0.001	96	114446	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.566	6.560	0.006	94	81593	53.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.932	0.005	0	102718	48.6	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.933	0.005	93	281451	46.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.566	11.573	-0.007	91	101293	44.5	
12 Chloromethane	50		1.773				ND	
13 Vinyl chloride	62		1.907				ND	
15 Bromomethane	94		2.241				ND	
16 Chloroethane	64		2.393				ND	
22 1,1-Dichloroethene	96		3.342				ND	
24 Acetone	43	3.445	3.446	-0.001	99	39409	62.3	
26 Carbon disulfide	76		3.628				ND	
31 Methylene Chloride	84		4.139				ND	
33 Acrylonitrile	53		4.522				ND	
34 trans-1,2-Dichloroethene	96		4.565				ND	
35 Methyl tert-butyl ether	73		4.577				ND	
37 1,1-Dichloroethane	63		5.198				ND	
45 cis-1,2-Dichloroethene	96		5.946				ND	
46 2-Butanone (MEK)	43	5.963	5.958	0.005	56	9939	10.5	
49 Chlorobromomethane	128		6.232				ND	
52 Chloroform	83		6.384				ND	
53 1,1,1-Trichloroethane	97		6.536				ND	
56 Carbon tetrachloride	117		6.713				ND	
58 Benzene	78		6.944				ND	
59 1,2-Dichloroethane	62		7.023				ND	
64 Trichloroethene	130		7.674				ND	
67 1,2-Dichloropropane	63		7.947				ND	
70 1,4-Dioxane	88		8.027				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.227				ND	
74 cis-1,3-Dichloropropene	75		8.671				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.830				ND	
76 Toluene	91		9.000				ND	
77 trans-1,3-Dichloropropene	75		9.249				ND	
79 1,1,2-Trichloroethane	97		9.450				ND	
80 Tetrachloroethene	164		9.517				ND	
82 2-Hexanone	43		9.657				ND	
84 Chlorodibromomethane	129		9.815				ND	
85 Ethylene Dibromide	107		9.931				ND	
87 Chlorobenzene	112		10.417				ND	
89 1,1,1,2-Tetrachloroethane	131		10.509				ND	
90 Ethylbenzene	106		10.515				ND	
91 m-Xylene & p-Xylene	106		10.649				ND	
92 o-Xylene	106		11.026				ND	
93 Styrene	104		11.044				ND	
94 Bromoform	173		11.233				ND	
99 1,1,2,2-Tetrachloroethane	83		11.707				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930020.D

Injection Date: 30-Sep-2015 19:04:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-48019-A-7

Lab Sample ID: 180-48019-7

Worklist Smp#: 20

Client ID: HD-QC2-0/1-4

Purge Vol: 5.000 mL

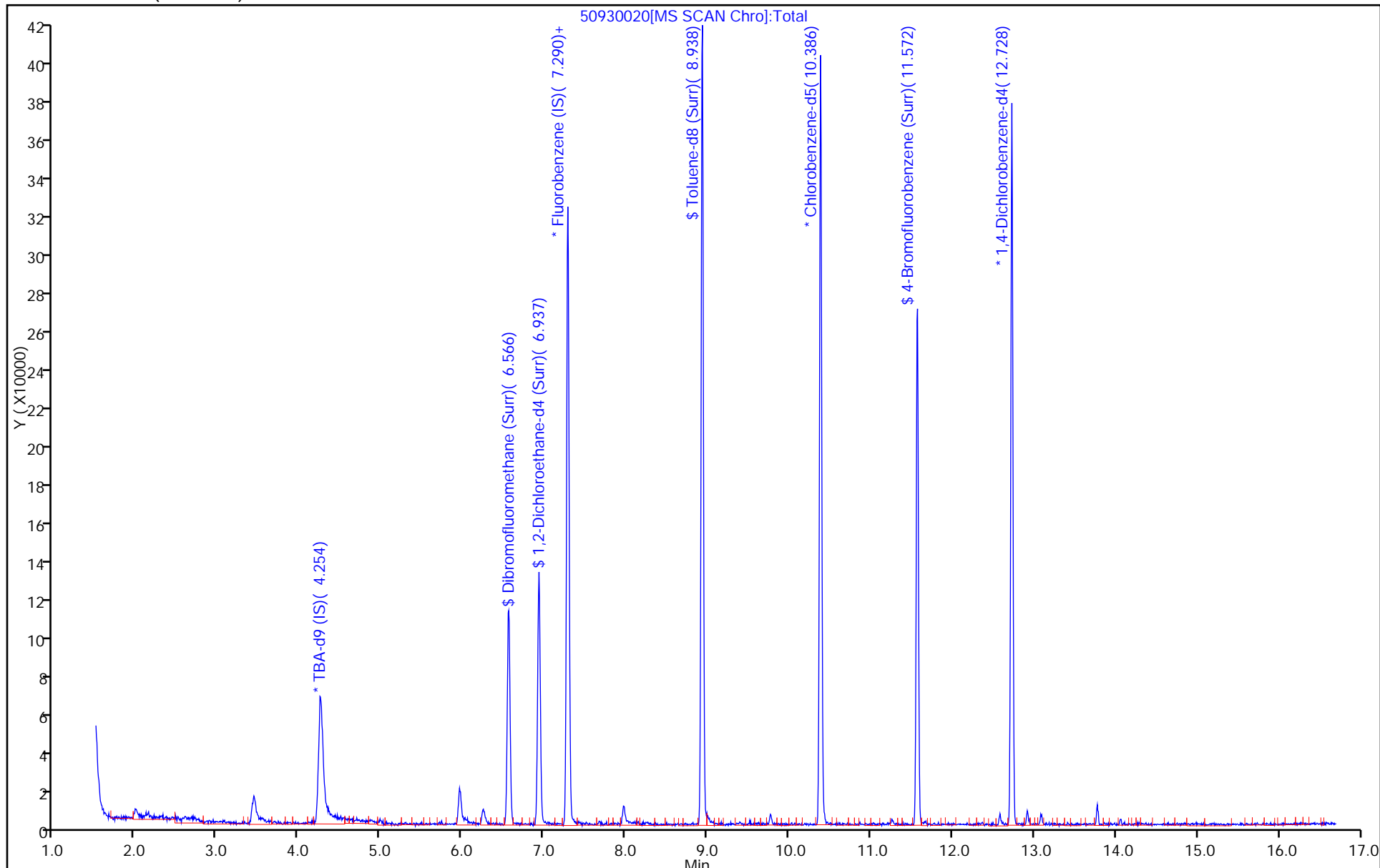
Dil. Factor: 1.0000

ALS Bottle#: 20

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930020.D

Injection Date: 30-Sep-2015 19:04:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-7

Lab Sample ID: 180-48019-7

Client ID: HD-QC2-0/1-4

Operator ID: 001562

ALS Bottle#: 20

Worklist Smp#: 20

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

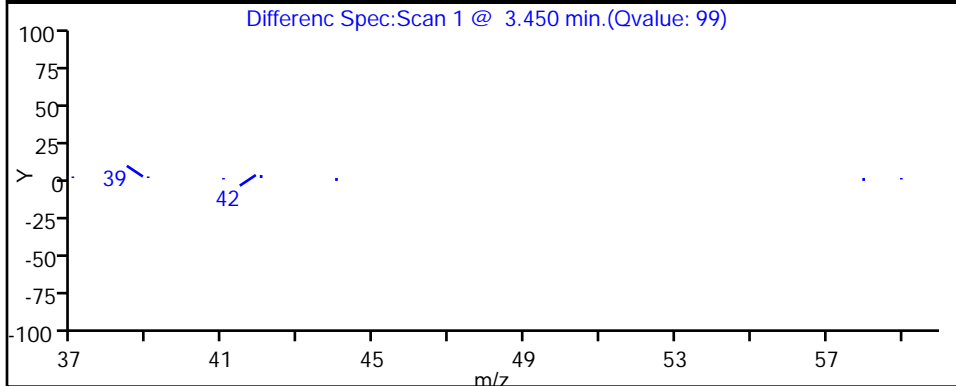
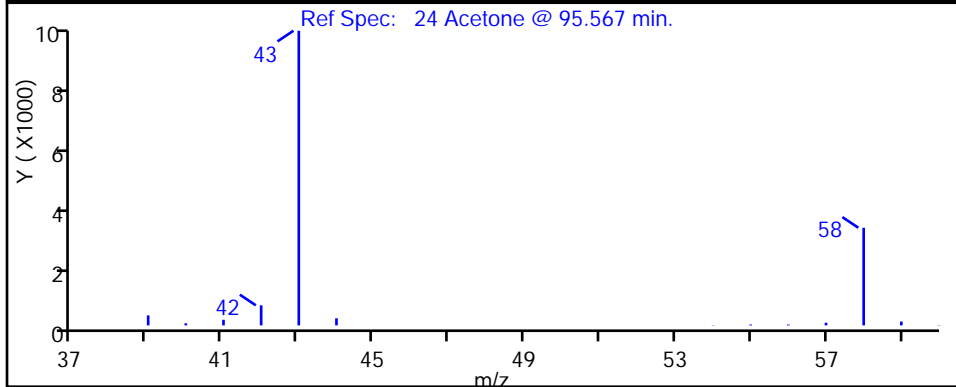
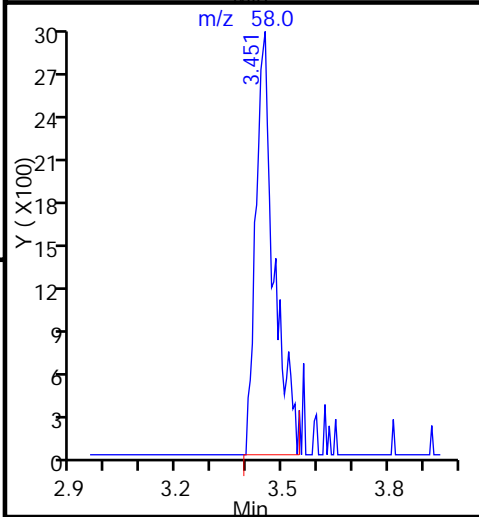
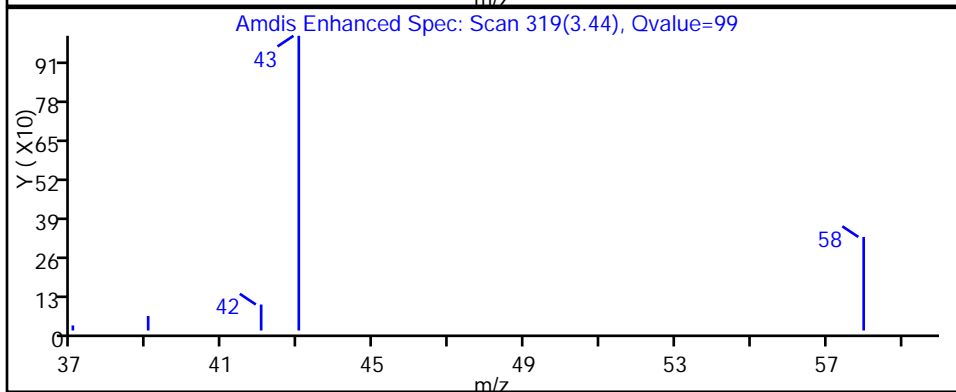
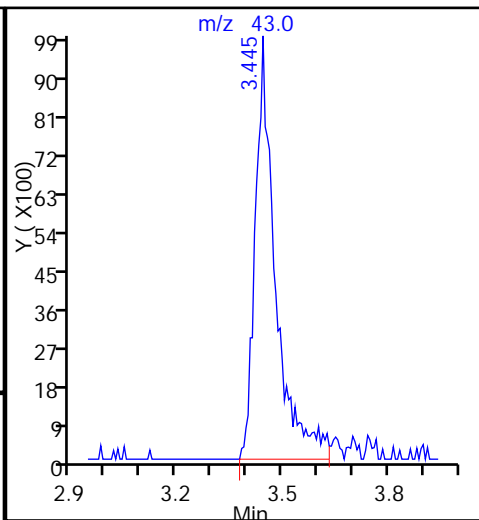
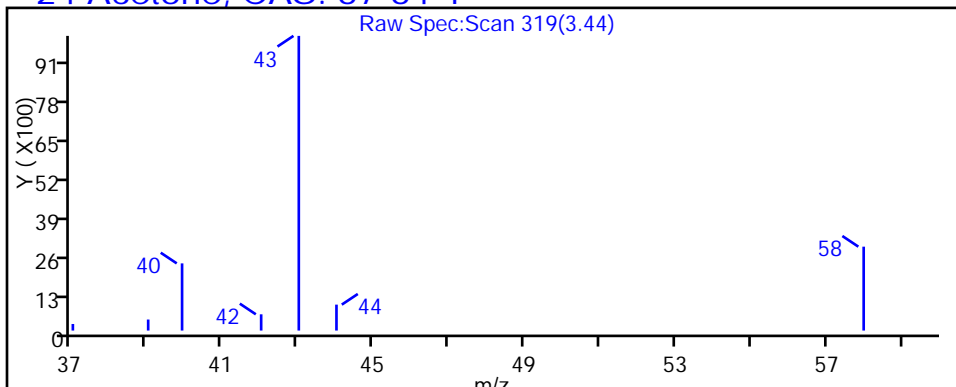
Method: MSVOA\_LL\_CHHP5

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\20150930-8759.b\50930020.D

Injection Date: 30-Sep-2015 19:04:30

Instrument ID: CHHP5

Lims ID: 180-48019-A-7

Lab Sample ID: 180-48019-7

Client ID: HD-QC2-0/1-4

Operator ID: 001562

ALS Bottle#: 20 Worklist Smp#: 20

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

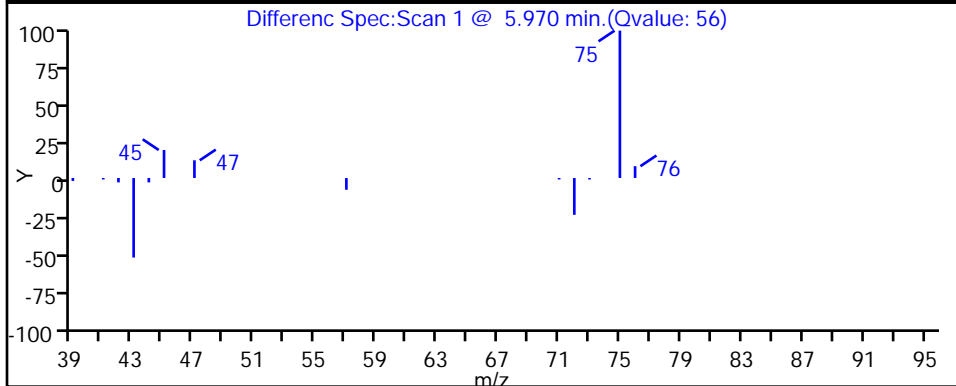
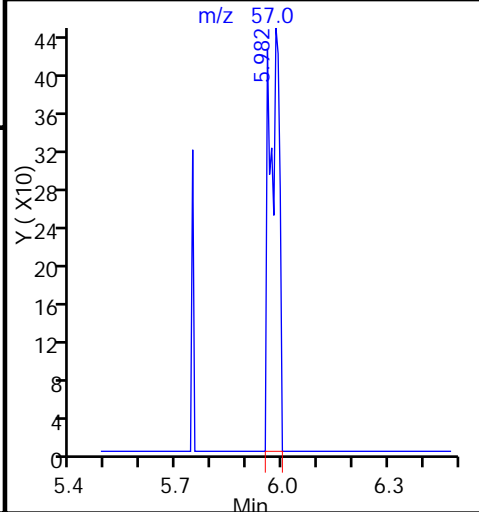
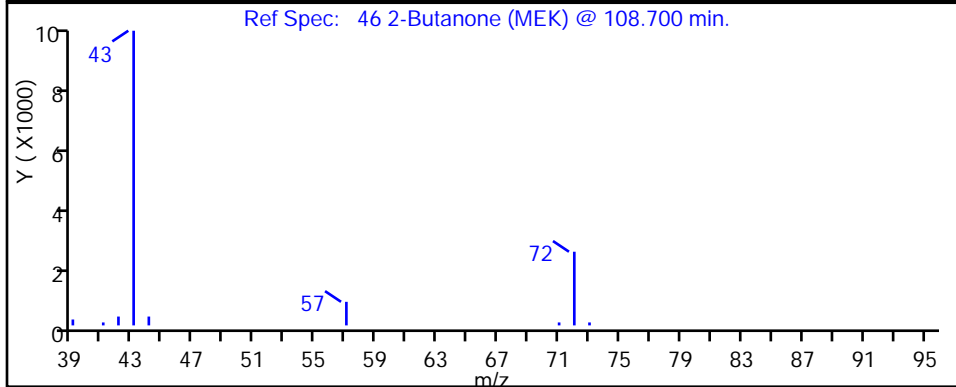
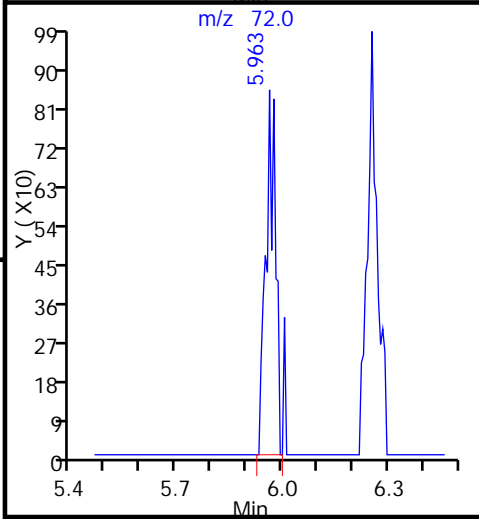
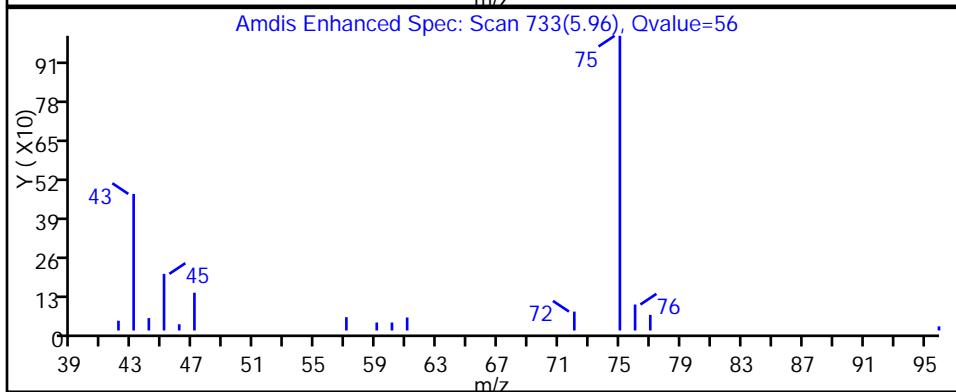
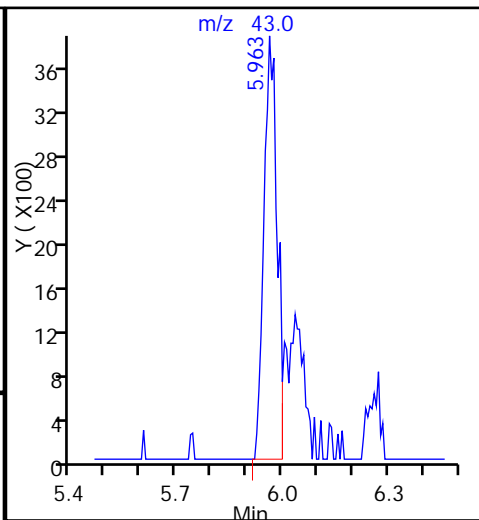
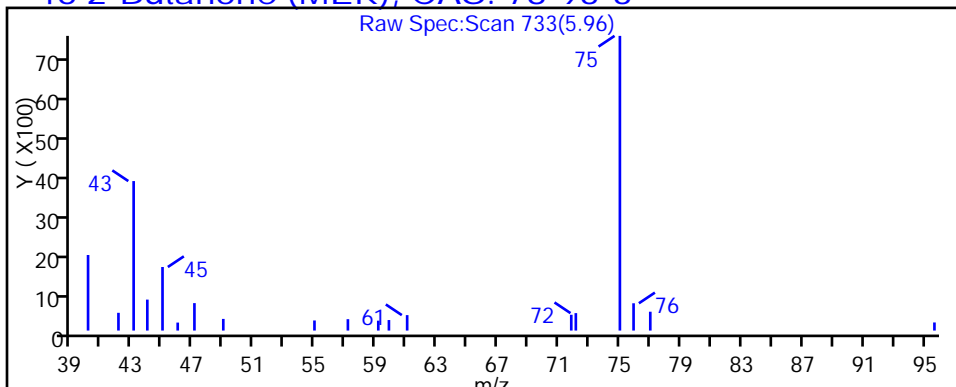
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

46 2-Butanone (MEK), CAS: 78-93-3



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-151868/6	50826006.D
Level 2	IC 180-151868/8	50826008.D
Level 3	ICIS 180-151868/9	50826009.D
Level 4	IC 180-151868/10	50826010.D
Level 5	IC 180-151868/11	50826011.D
Level 6	IC 180-151868/12	50826012.D
Level 7	IC 180-151868/13	50826013.D
Level 8	IC 180-151868/14	50826014.D

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														
Dichlorodifluoromethane	0.3287	0.2973	0.3036	0.2652	0.2686	Ave		0.2825			0.1000	8.8	20.0				
	0.2623	0.2575	0.2768														
Chloromethane	0.5129	0.4550	0.4119	0.3793	0.3858	Ave		0.4148			0.1000	11.6	20.0				
	0.3809	0.3728	0.4194														
Vinyl chloride	0.4001	0.3977	0.3943	0.3444	0.3565	Ave		0.3679			0.1000	7.2	20.0				
	0.3434	0.3372	0.3699														
1,3-Butadiene	0.5239	0.4751	0.4623	0.3955	0.4108	Ave		0.4345			0.0100	11.0	20.0				
	0.3986	0.3875	0.4226														
Bromomethane	0.1691	0.1576	0.1270	0.1608	0.1494	Ave		0.1497			0.0500	10.7	20.0				
	0.1521	0.1241	0.1576														
Chloroethane	0.2791	0.2380	0.2154	0.2110	0.2070	Ave		0.2220			0.0500	11.6	20.0				
	0.2041	0.2011	0.2199														
Dichlorofluoromethane	0.5546	0.5213	0.5031	0.4321	0.4354	Ave		0.4709			0.0100	10.5	20.0				
	0.4260	0.4285	0.4664														
Trichlorofluoromethane	0.3948	0.3814	0.3774	0.3273	0.3345	Ave		0.3523			0.1000	8.0	20.0				
	0.3299	0.3233	0.3496														
Ethyl ether	0.4234	0.3324	0.3164	0.2973	0.2952	Ave		0.3265			0.0100	13.7	20.0				
	0.2964	0.2960	0.3549														
Acrolein	0.0512	0.0489	0.0480	0.0441	0.0462	Ave		0.0486			0.0100	6.7	20.0				
	0.0479	0.0478	0.0550														
1,1-Dichloroethene	0.2946	0.2816	0.2875	0.2618	0.2736	Ave		0.2785			0.1000	5.0	20.0				
	0.2694	0.2624	0.2968														
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3300	0.3157	0.3079	0.2771	0.2839	Ave		0.2951			0.1000	7.2	20.0				
	0.2776	0.2707	0.2975														
Acetone	0.1264	0.1213	0.0958	0.0854	0.0868	Ave		0.1009			0.0500	15.8	20.0				
	0.0944	0.0888	0.1083														
Iodomethane	0.4682	0.4179	0.4130	0.3863	0.3938	Ave		0.4150			0.0100	7.5	20.0				
	0.3963	0.3889	0.4559														

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.: 180-48019-1

Analy Batch No.: 151868

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

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 08/26/2015 15:04

Calibration End Date: 08/26/2015 17:52

Calibration ID: 25113

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 8	LVL 5												
Carbon disulfide	0.6362 0.6697	0.5938 0.6592	0.6262 0.7601	0.5915	0.6365	Ave		0.6466			0.1000	8.3	20.0				
Allyl chloride	0.1392 0.1626	0.1500 0.1654	0.1522 0.1887	0.1471	0.1566	Ave		0.1577			0.0100	9.6	20.0				
Methyl acetate	0.3337 0.2890	0.3263 0.2857	0.2882 0.3263	0.2787	0.2836	Ave		0.3015			0.1000	7.6	20.0				
Methylene Chloride	0.6517 0.2904	0.3723 0.2913	0.3258 0.3382	0.3056	0.2911	Lin2	1.8054	0.2910			0.1000			0.9950		0.9900	
tert-Butyl alcohol	1.3524 1.1479	1.0348 1.0778	1.0400 1.1523	1.0913	1.1079	Ave		1.1255			0.0100	9.0	20.0				
Acrylonitrile	0.1618 0.1395	0.1545 0.1388	0.1504 0.1578	0.1327	0.1347	Ave		0.1463			0.0100	7.7	20.0				
trans-1,2-Dichloroethene	0.3383 0.2905	0.3111 0.2805	0.3070 0.3253	0.2770	0.2891	Ave		0.3024			0.1000	7.2	20.0				
Methyl tert-butyl ether	0.7340 0.6851	0.6905 0.6950	0.6558 0.8276	0.6473	0.6637	Ave		0.6999			0.1000	8.3	20.0				
Hexane	0.5487 0.5062	0.5124 0.4822	0.5150 0.5325	0.4707	0.4929	Ave		0.5076			0.0100	5.1	20.0				
1,1-Dichloroethane	0.6731 0.5678	0.6009 0.5615	0.5929 0.6517	0.5533	0.5641	Ave		0.5957			0.2000	7.5	20.0				
Vinyl acetate	0.4658 0.4559	0.4321 0.4509	0.4142 0.5072	0.4114	0.4375	Ave		0.4469			0.0100	6.9	20.0				
2,2-Dichloropropane	0.2543 0.2353	0.2294 0.2294	0.2373 0.2670	0.2227	0.2344	Ave		0.2387			0.0100	6.1	20.0				
cis-1,2-Dichloroethene	0.3560 0.3133	0.3276 0.3052	0.3171 0.3596	0.3029	0.3027	Ave		0.3230			0.1000	7.1	20.0				
2-Butanone (MEK)	0.1700 0.1465	0.1604 0.1446	0.1482 0.1652	0.1430	0.1348	Ave		0.1516			0.0500	8.1	20.0				
Bromochloromethane	0.1549 0.1331	0.1498 0.1336	0.1364 0.1592	0.1347	0.1330	Ave		0.1418			0.0100	7.7	20.0				
Tetrahydrofuran	0.1584 0.1188	0.1210 0.1173	0.1165 0.1328	0.1044	0.1035	Ave		0.1216			0.0100	14.4	20.0				
Chloroform	0.6121 0.4769	0.5334 0.4687	0.5043 0.5518	0.4874	0.4825	Ave		0.5146			0.2000	9.5	20.0				
1,1,1-Trichloroethane	0.3907 0.3764	0.3802 0.3610	0.3863 0.4248	0.3588	0.3661	Ave		0.3805			0.1000	5.6	20.0				
Cyclohexane	0.6174 0.6347	0.6332 0.6154	0.6564 0.6862	0.6129	0.6374	Ave		0.6367			0.1000	3.9	20.0				
Carbon tetrachloride	0.3208 0.3222	0.3255 0.3130	0.3231 0.3616	0.3071	0.3191	Ave		0.3240			0.1000	5.0	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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														
1,1-Dichloropropene	0.4109 0.4177	0.4291 0.3991	0.4295 0.4615	0.4010	0.4176	Ave		0.4208			0.0100	4.7	20.0				
Isobutyl alcohol	0.0095 0.0095	0.0091 0.0100	0.0099 0.0111	0.0081	0.0090	Ave		0.0095	*	0.0100	9.4	20.0					
Benzene	1.3619 1.1379	1.3471 1.1166	1.2583 1.2803	1.1865	1.1745	Ave		1.2329		0.5000	7.6	20.0					
1,2-Dichloroethane	0.4741 0.4037	0.4480 0.4008	0.4163 0.4668	0.4018	0.3996	Ave		0.4264		0.1000	7.4	20.0					
n-Heptane	0.4905 0.4664	0.4584 0.4370	0.4667 0.4920	0.4330	0.4446	Ave		0.4611		0.0100	4.9	20.0					
Trichloroethene	0.3438 0.2884	0.3023 0.2830	0.3001 0.3282	0.2819	0.2852	Ave		0.3016		0.2000	7.6	20.0					
Methylcyclohexane	0.4249 0.4931	0.4566 0.4767	0.4833 0.5272	0.4569	0.4841	Ave		0.4753		0.1000	6.4	20.0					
1,2-Dichloropropane	0.3806 0.3114	0.3166 0.3023	0.3142 0.3619	0.2970	0.3041	Ave		0.3235		0.1000	9.5	20.0					
1,4-Dioxane	0.0018 0.0024	0.0022 0.0023	0.0022 0.0026	0.0021	0.0022	Ave		0.0022	*	0.0100	11.0	20.0					
Dibromomethane	0.1726 0.1580	0.1745 0.1564	0.1618 0.1826	0.1547	0.1528	Ave		0.1642		0.0100	6.7	20.0					
Bromodichloromethane	0.3187 0.3277	0.3165 0.3275	0.3067 0.3841	0.3076	0.3105	Ave		0.3249		0.2000	7.8	20.0					
cis-1,3-Dichloropropene	0.3262 0.4065	0.3324 0.4128	0.3462 0.4886	0.3587	0.3740	Ave		0.3807		0.2000	14.2	20.0					
4-Methyl-2-pentanone (MIBK)	1.0903 1.2759	1.2109 1.2196	1.2320 1.3578	1.2204	1.2490	Ave		1.2320		0.1000	6.0	20.0					
Toluene	5.5703 4.5203	5.5571 4.1167	5.4822 4.5535	4.9121	4.8891	Ave		4.9502		0.4000	11.0	20.0					
trans-1,3-Dichloropropene	1.1012 1.3656	1.2222 1.3022	1.2566 1.5136	1.2587	1.3145	Ave		1.2918		0.1000	9.2	20.0					
Ethyl methacrylate	1.0084 1.3290	1.1451 1.2693	1.2245 1.4637	1.2645	1.2889	Ave		1.2492		0.0100	10.7	20.0					
1,1,2-Trichloroethane	0.9854 0.8899	1.0921 0.8150	0.9726 0.9474	0.9168	0.9135	Ave		0.9416		0.1000	8.6	20.0					
Tetrachloroethene	1.1379 0.8860	1.0568 0.8108	1.0252 0.9003	0.9316	0.9384	Ave		0.9609		0.2000	11.0	20.0					
1,3-Dichloropropane	1.9919 1.6394	1.8881 1.5526	1.7977 1.7492	1.7044	1.6621	Ave		1.7482		0.0100	8.1	20.0					
2-Hexanone	0.8243 0.9047	0.9086 0.8711	0.9027 0.9534	0.8729	0.8767	Ave		0.8893		0.1000	4.2	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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	0.7656 0.8311	0.7604 0.7903	0.8248 0.9219	0.8043	0.8232	Ave		0.8152			0.1000	6.2	20.0				
1,2-Dibromoethane (EDB)	0.9759 0.8616	0.9872 0.8306	0.9279 0.9400	0.8704	0.8651	Ave		0.9073			0.1000	6.4	20.0				
3-Chlorobenzotrifluoride	1.9141 1.5139	1.7300 1.3853	1.7441 1.3810	1.5596	1.4979	Ave		1.5907			0.0100	11.9	20.0				
Chlorobenzene	3.7359 2.9360	3.5057 2.7547	3.3592 3.0452	3.0983	3.0632	Ave		3.1873			0.5000	10.1	20.0				
4-Chlorobenzotrifluoride	1.7602 1.4166	1.6482 1.3106	1.6401 1.3278	1.5024	1.4249	Ave		1.5038			0.0100	10.9	20.0				
1,1,1,2-Tetrachloroethane	1.1225 0.9996	1.0966 0.9489	1.0413 1.0904	1.0057	1.0062	Ave		1.0389			0.0100	5.7	20.0				
Ethylbenzene	1.6196 1.6672	1.7534 1.5472	1.8359 1.7000	1.6962	1.6973	Ave		1.6896			0.1000	5.1	20.0				
m-Xylene & p-Xylene	1.9469 2.0590	2.1320 1.8861	2.2561 2.1036	2.0873	2.1024	Ave		2.0717			0.1000	5.5	20.0				
o-Xylene	1.7875 1.9631	1.9618 1.8192	2.1700 2.0438	2.0181	1.9885	Ave		1.9690			0.3000	6.2	20.0				
Styrene	2.9089 3.2190	3.4288 3.0069	3.5226 3.3091	3.3907	3.3066	Ave		3.2616			0.3000	6.4	20.0				
Bromoform	0.4690 0.4795	0.4313 0.4703	0.4499 0.5395	0.4346	0.4474	Ave		0.4652			0.1000	7.4	20.0				
2-Chlorobenzotrifluoride	1.7885 1.4787	1.7489 1.3827	1.7033 1.3749	1.5707	1.4741	Ave		1.5652			0.0100	10.5	20.0				
Isopropylbenzene	4.3653 4.6596	5.1113 4.2808	5.5491 4.6316	4.9755	5.0001	Ave		4.8217			0.1000	8.7	20.0				
1,1,2,2-Tetrachloroethane	1.4661 1.1699	1.3993 1.1182	1.3725 1.2326	1.2215	1.1808	Ave		1.2701			0.3000	9.9	20.0				
Bromobenzene	0.9000 0.8558	0.8314 0.8194	0.8380 0.9507	0.8287	0.8423	Ave		0.8583			0.0100	5.2	20.0				
trans-1,4-Dichloro-2-butene	0.2917 0.3299	0.2806 0.3207	0.2875 0.3711	0.2997	0.3010	Ave		0.3103			0.0100	9.5	20.0				
1,2,3-Trichloropropane	0.3063 0.2797	0.2926 0.2700	0.2690 0.3158	0.2674	0.2639	Ave		0.2831			0.0100	6.9	20.0				
N-Propylbenzene	0.8996 1.0031	0.9330 0.9647	1.0104 1.0875	0.9757	0.9863	Ave		0.9825			0.0100	5.7	20.0				
2-Chlorotoluene	0.7422 0.8347	0.8275 0.8182	0.8534 0.9287	0.8318	0.8446	Ave		0.8351			0.0100	6.1	20.0				
3-Chlorotoluene	0.8266 0.8699	0.8669 0.8353	0.8759 0.8984	0.8585	0.8348	Ave		0.8583			0.0100	2.9	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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	2.3645 2.7734	2.8908 2.6232	2.9957 2.8967	2.8185	2.8452	Ave		2.7760			0.0100	7.1	20.0				
4-Chlorotoluene	0.8633 0.9172	0.9746 0.8728	0.9234 0.9963	0.8946	0.9096	Ave		0.9190			0.0100	5.0	20.0				
tert-Butylbenzene	1.8741 2.3430	2.1778 2.2068	2.3521 2.4799	2.2754	2.3463	Ave		2.2569			0.0100	8.0	20.0				
1,2,4-Trimethylbenzene	2.3075 2.7925	2.8627 2.6520	2.9863 2.9459	2.8624	2.8401	Ave		2.7812			0.0100	7.8	20.0				
3,4-Dichlorobenzotrifluoride	0.9332 0.7629	0.7706 0.7120	0.8114 0.7421	0.7469	0.7246	Ave		0.7754			0.0100	9.1	20.0				
sec-Butylbenzene	2.7780 3.1978	3.2532 3.0155	3.5024 3.2789	3.1902	3.2760	Ave		3.1865			0.0100	6.7	20.0				
1,3-Dichlorobenzene	1.5731 1.4773	1.6002 1.4395	1.5858 1.6167	1.4673	1.4672	Ave		1.5284			0.6000	4.7	20.0				
4-Isopropyltoluene	2.1994 2.7400	2.7068 2.6136	2.9233 2.8630	2.7523	2.7684	Ave		2.6959			0.0100	8.2	20.0				
1,4-Dichlorobenzene	1.8395 1.4959	1.6730 1.4568	1.6062 1.6474	1.5057	1.4918	Ave		1.5895			0.5000	8.1	20.0				
2,4-Dichlorobenzotrifluoride	0.8167 0.7142	0.7458 0.6499	0.7804 0.6801	0.6991	0.6616	Ave		0.7185			0.0100	8.2	20.0				
2,5-Dichlorobenzotrifluoride	0.8953 0.7661	0.7731 0.7682	0.8004 0.7491	0.7462	0.7137	Ave		0.7765			0.0100	7.0	20.0				
n-Butylbenzene	1.9548 2.3709	2.2758 2.2727	2.5056 2.4426	2.2735	2.3594	Ave		2.3069			0.0100	7.2	20.0				
1,2-Dichlorobenzene	1.6347 1.3388	1.5012 1.3288	1.4944 1.4525	1.3452	1.3303	Ave		1.4282			0.4000	7.8	20.0				
1,2-Dibromo-3-Chloropropane	0.1072 0.1191	0.1212 0.1226	0.1194 0.1351	0.1034	0.1102	Ave		0.1173			0.0500	8.6	20.0				
2,4- & 2,5- & 2,6- Dichlorotoluene	0.7554 0.8278	0.7846 0.8399	0.9569 0.8065	0.7811	0.7733	Ave		0.8157			0.0100	7.8	20.0				
2,3- & 3,4- Dichlorotoluene	0.7045 0.7833	0.7591 0.8096	0.9510 0.7804	0.7194	0.7151	Ave		0.7778			0.0100	10.2	20.0				
1,2,4-Trichlorobenzene	0.5337 0.5349	0.5713 0.5698	0.6897 0.5692	0.4840	0.4928	Ave		0.5557			0.2000	11.5	20.0				
Hexachlorobutadiene	0.2789 0.2527	0.2957 0.2535	0.3393 0.2508	0.2366	0.2338	Ave		0.2677			0.0100	13.3	20.0				
Naphthalene	1.2233 1.4724	1.2705 1.5865	1.7478 1.5810	1.2452	1.2988	Ave		1.4282			0.0100	13.7	20.0				
1,2,3-Trichlorobenzene	0.4915 0.4124	0.4501 0.4480	0.5796 0.4500	0.3828	0.3844	Ave		0.4498			0.0100	14.2	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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	0.1695 0.1581	0.1451 0.1827	0.2185 0.1750	0.1232	0.1263	Ave		0.1623			0.0100	19.4		20.0			
2,3,6-Trichlorotoluene	0.1057 +++++	0.1323 +++++	0.2120 +++++	0.1162	0.1265	Ave		0.1496			0.0100	24.0	*	20.0			
Dibromofluoromethane (Surr)	0.2897 0.2274	0.2548 0.2230	0.2447 0.2662	0.2287	0.2299	Ave		0.2455				9.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.4203 0.3099	0.3560 0.3035	0.3369 0.3556	0.3100	0.3058	Ave		0.3373				11.9		20.0			
Toluene-d8 (Surr)	4.5689 3.4832	4.1450 3.1902	4.3481 3.5716	3.8169	3.7347	Ave		3.8573				12.1		20.0			
4-Bromofluorobenzene (Surr)	1.6296 1.3602	1.5022 1.2884	1.5824 1.4505	1.4462	1.3812	Ave		1.4551				7.8		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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-151868/6	50826006.D
Level 2	IC 180-151868/8	50826008.D
Level 3	ICIS 180-151868/9	50826009.D
Level 4	IC 180-151868/10	50826010.D
Level 5	IC 180-151868/11	50826011.D
Level 6	IC 180-151868/12	50826012.D
Level 7	IC 180-151868/13	50826013.D
Level 8	IC 180-151868/14	50826014.D

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		
Dichlorodifluoromethane	FB	Ave	13335 461015	63359 506611	139988 585297	195493	268740	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	20806 669660	96975 733518	189967 886889	279657	386017	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	16232 603655	84746 663498	181809 782206	253941	356745	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	21253 700624	101243 762590	213171 893578	291582	411077	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Ave	6860 267454	33586 244127	58568 333317	118541	149495	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	11321 358728	50718 395735	99329 465079	155578	207155	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	22499 748877	111107 843233	232009 986298	318608	435665	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	16013 579992	81291 636269	174036 739174	241309	334740	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	17175 521056	70836 582513	145899 750491	219194	295395	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	41531 108307	52087 117496	66358 127965	75936	92519	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	11952 473565	60024 516257	132602 627614	192998	273818	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	13388 488054	67283 532678	141996 629046	204297	284081	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	25628 332039	51703 349354	88342 457819	125942	173687	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	18992 696716	89056 765249	190440 963985	284793	394076	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	25807 1177201	126552 1297173	288788 1607306	436105	636866	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.: 180-48019-1

Analy Batch No.: 151868

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

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 08/26/2015 15:04

Calibration End Date: 08/26/2015 17:52

Calibration ID: 25113

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		
Allyl chloride	FB	Ave	5646 285911	31974 325399	70192 399041	108440	156677	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	67684 2539904	347746 2811173	664608 3450277	1027560	1419018	25.0 875	125 1000	250 1250	375	500
Methylene Chloride	FB	Lin2	26437 510471	79338 573290	150258 715184	225319	291271	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBA	Ave	9257 352268	39038 410928	81932 514360	122262	185374	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	65631 2452551	329204 2730347	693478 3337347	978697	1347643	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	13723 510637	66301 552053	141577 687878	204201	289331	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	29774 1204325	147150 1367672	302403 1750025	477236	664089	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	22257 889892	109198 948868	237492 1125958	347025	493203	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	27303 998105	128072 1104940	273423 1377944	407919	564450	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	18896 801339	92081 887283	191017 1072494	303320	437799	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	10315 413686	48880 451339	109416 564524	164171	234514	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	14442 550789	69819 600559	146208 760457	223289	302874	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	34471 514894	68384 569128	136667 698551	210830	269779	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	6284 234034	31931 262832	62915 336595	99282	133128	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	12850 417684	51589 461621	107444 561739	153971	207145	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Ave	24828 838419	113670 922240	232542 1166838	359318	482795	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	15850 661680	81030 710348	178131 898258	264507	366328	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	25044 1115710	134937 1210903	302702 1451032	451893	637776	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	13013 566329	69375 616016	148991 764597	226405	319309	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	16668 734207	91438 785333	198075 975802	295676	417880	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	9663 417725	48239 492768	113924 588608	149085	224262	125 4375	625 5000	1250 6250	1875	2500

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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
Benzene	FB	Ave	55246 2000326	287091 2197241	580241 2707324	874781	1175215	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	19231 709743	95482 788760	191991 987010	296218	399895	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	19899 819932	97699 859948	215218 1040377	319252	444901	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	13948 506964	64418 556980	138404 693909	207852	285365	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	17237 866758	97305 937977	222858 1114866	336831	484430	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	15440 547361	67479 594824	144895 765352	218947	304322	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	1429 82622	9374 91547	20164 111802	31691	44562	100 3500	500 4000	1000 5000	1500	2000
Dibromomethane	FB	Ave	7003 277699	37187 307857	74626 386058	114083	152946	5.00 175	25.0 200	50.0 250	75.0	100
Bromodichloromethane	FB	Ave	12926 576102	67441 644471	141423 812136	226806	310676	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	13234 714562	70847 812298	159644 1033255	264451	374197	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	52387 1157588	122590 1320471	267134 1599371	434749	614019	25.0 350	50.0 400	100 500	150	200
Toluene	CBZ	Ave	53527 2050607	281285 2228576	594334 2681762	874948	1201786	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	10582 619485	61867 704918	136231 891401	224205	323125	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBZ	Ave	9690 602921	57962 687101	132749 862044	225233	316812	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	9469 403722	55277 441190	105440 557982	163298	224541	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBZ	Ave	10935 401915	53495 438898	111146 530215	165929	230665	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBZ	Ave	19141 743698	95569 840507	194887 1030200	303582	408560	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBZ	Ave	39604 820858	91984 943138	195734 1123041	310969	430988	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBZ	Ave	7357 377032	38492 427847	89414 542940	143257	202349	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	9378 390862	49971 449617	100600 553588	155041	212653	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	18393 686777	87568 749898	189078 813323	277802	368187	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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	CBZ	Ave	35900 1331912	177451 1491257	364174 1793475	551865	752971	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	16914 642626	83430 709487	177807 781989	267607	350243	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	10787 453483	55507 513686	112884 642159	179137	247335	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBZ	Ave	15563 756322	88753 837593	199030 1001210	302122	417206	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	18709 934055	107918 1021032	244588 1238884	371799	516778	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBZ	Ave	17177 890574	99302 984811	235252 1203666	359461	488783	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBZ	Ave	27953 1460286	173558 1627751	381888 1948876	603962	812783	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBZ	Ave	4507 217546	21829 254607	48771 317730	77411	109983	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	17186 670799	88525 748529	184654 809757	279773	362334	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBZ	Ave	41948 2113845	258721 2317406	601591 2727755	886244	1229067	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	14088 530728	70831 605346	148796 725938	217578	290248	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCB	Ave	12648 543146	66130 609774	144660 743219	218069	300450	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	4099 209384	22318 238659	49630 290130	78865	107372	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCB	Ave	4305 177490	23273 200908	46443 246872	70373	94129	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCB	Ave	12643 636587	74204 717909	174426 850210	256762	351814	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCB	Ave	10430 529736	65813 608876	147328 726063	218909	301246	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorotoluene	DCB	Ave	11617 552058	68954 621607	151211 702342	225916	297767	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	33229 1760059	229921 1952122	517168 2264532	741712	1014826	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCB	Ave	12133 582109	77519 649501	159410 778860	235437	324433	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCB	Ave	26338 1486960	173217 1642231	406052 1938716	598804	836893	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	32428 1772230	227690 1973541	515539 2303042	753282	1013032	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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	DCB	Ave	13115 484133	61289 529814	140073 580120	196559	258438	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCB	Ave	39041 2029430	258745 2244027	604638 2563359	839536	1168492	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCB	Ave	22108 937539	127273 1071203	273757 1263925	386149	523315	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCB	Ave	30909 1738859	215293 1944911	504672 2238219	724310	987448	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCB	Ave	25851 949324	133066 1084086	277292 1287906	396239	532103	5.00 175	25.0 200	50.0 250	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	11477 453275	59316 483618	134729 531698	183967	235991	5.00 175	25.0 200	50.0 250	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	12582 486163	61489 571654	138171 585601	196358	254571	5.00 175	25.0 200	50.0 250	75.0	100
n-Butylbenzene	DCB	Ave	27472 1504673	181007 1691227	432555 1909580	598297	841574	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCB	Ave	22973 849612	119403 988861	257985 1135542	354012	474503	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	1507 75555	9637 91242	20608 105625	27203	39315	5.00 175	25.0 200	50.0 250	75.0	100
2,4- & 2,5- & 2,6- Dichlorotoluene	DCB	Ave	31847 1576122	187206 1875036	495585 1891413	616649	827426	15.0 525	75.0 600	150 750	225	300
2,3- & 3,4- Dichlorotoluene	DCB	Ave	19801 994231	120746 1204899	328345 1220209	378630	510138	10.0 350	50.0 400	100 500	150	200
1,2,4-Trichlorobenzene	DCB	Ave	7500 339446	45439 424061	119069 445017	127381	175776	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCB	Ave	3919 160392	23516 188644	58574 196056	62268	83392	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCB	Ave	17192 934428	101055 1180622	301738 1235965	327683	463258	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	6907 261711	35802 333363	100055 351787	100749	137103	5.00 175	25.0 200	50.0 250	75.0	100
2,4,5-Trichlorotoluene	DCB	Ave	2382 100325	11540 135933	37716 136778	32434	45065	5.00 175	25.0 200	50.0 250	75.0	100
2,3,6-Trichlorotoluene	DCB	Ave	1485 +++++	10524 +++++	36592 +++++	30574	45128	5.00 +++++	25.0 +++++	50.0 +++++	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	11752 399678	54310 438908	112824 562879	168602	230039	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	17051 544829	75876 597233	155346 751925	228530	306020	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	43904 1580158	209810 1727014	471382 2103482	679876	918031	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

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)	CBZ	Ave	15659 617045	76038 697446	171548 854277	257596	339508	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.: 180-48019-1 Analy Batch No.: 151868

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

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

Calibration Start Date: 08/26/2015 15:04 Calibration End Date: 08/26/2015 17:52 Calibration ID: 25113

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-151868/6	50826006.D
Level 2	IC 180-151868/8	50826008.D
Level 3	ICIS 180-151868/9	50826009.D
Level 4	IC 180-151868/10	50826010.D
Level 5	IC 180-151868/11	50826011.D
Level 6	IC 180-151868/12	50826012.D
Level 7	IC 180-151868/13	50826013.D
Level 8	IC 180-151868/14	50826014.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				
Methylene Chloride	-0.1	3.1	-0.5	-3.3	-6.2	-3.8	40	40	40	40	40	40
	-3.0	13.7					40	40				

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826006.D  
 Lims ID: IC VSTD1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 26-Aug-2015 15:04:30 ALS Bottle#: 6 Worklist Smp#: 6  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD1  
 Misc. Info.: 180-0008300-006  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 12:16:48 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond Date: 27-Aug-2015 12:16:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.266	4.274	-0.008	0	136898	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.291	-0.001	98	405648	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.387	-0.001	88	96094	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.730	-0.002	97	140534	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.566	6.567	-0.001	89	11752	5.00	5.90	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.938	-0.001	0	17051	5.00	6.23	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.933	0.005	95	43904	5.00	5.92	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.574	-0.002	84	15659	5.00	5.60	
11 Dichlorodifluoromethane	85	1.608	1.627	-0.019	94	13335	5.00	5.82	
12 Chloromethane	50	1.760	1.761	-0.001	98	20806	5.00	6.18	
13 Vinyl chloride	62	1.906	1.901	0.005	72	16232	5.00	5.44	
14 Butadiene	39	1.930	1.931	-0.001	96	21253	5.00	6.03	
15 Bromomethane	94	2.228	2.236	-0.008	92	6860	5.00	5.65	
16 Chloroethane	64	2.386	2.376	0.010	96	11321	5.00	6.29	
17 Dichlorofluoromethane	67	2.660	2.661	-0.001	95	22499	5.00	5.89	
18 Trichlorofluoromethane	101	2.648	2.661	-0.013	71	16013	5.00	5.60	M
20 Ethyl ether	59	3.049	3.051	-0.002	97	17175	5.00	6.48	
21 Acrolein	56	3.220	3.233	-0.013	99	41531	100.0	105.2	
22 1,1-Dichloroethene	96	3.335	3.355	-0.020	78	11952	5.00	5.29	
23 1,1,2-Trichloro-1,2,2-trif	101	3.402	3.416	-0.014	66	13388	5.00	5.59	
24 Acetone	43	3.451	3.452	-0.001	99	25628	25.0	31.3	M
25 Iodomethane	142	3.536	3.556	-0.020	100	18992	5.00	5.64	
26 Carbon disulfide	76	3.627	3.635	-0.008	99	25807	5.00	4.92	
28 3-Chloro-1-propene	76	3.913	3.921	-0.008	88	5646	5.00	4.41	
30 Methyl acetate	43	3.938	3.945	-0.007	100	67684	25.0	27.7	
31 Methylene Chloride	84	4.126	4.152	-0.026	96	26437	5.00	4.99	
32 2-Methyl-2-propanol	59	4.406	4.413	-0.007	90	9257	50.0	60.1	
33 Acrylonitrile	53	4.515	4.517	-0.002	99	65631	50.0	55.3	
34 trans-1,2-Dichloroethene	96	4.558	4.566	-0.008	90	13723	5.00	5.59	
35 Methyl tert-butyl ether	73	4.576	4.584	-0.008	92	29774	5.00	5.24	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.991	-0.001	93	22257	5.00	5.40	
37 1,1-Dichloroethane	63	5.203	5.198	0.005	96	27303	5.00	5.65	
38 Vinyl acetate	43	5.252	5.253	-0.001	98	18896	5.00	5.21	
45 cis-1,2-Dichloroethene	96	5.951	5.953	-0.002	85	14442	5.00	5.51	
44 2,2-Dichloropropane	77	5.939	5.946	-0.007	60	10315	5.00	5.33	
46 2-Butanone (MEK)	43	5.963	5.959	0.004	97	34471	25.0	28.0	
49 Chlorobromomethane	128	6.237	6.238	-0.001	92	6284	5.00	5.46	
51 Tetrahydrofuran	42	6.249	6.257	-0.008	93	12850	10.0	13.0	
52 Chloroform	83	6.389	6.385	0.005	74	24828	5.00	5.95	
53 1,1,1-Trichloroethane	97	6.535	6.549	-0.014	91	15850	5.00	5.13	
54 Cyclohexane	56	6.614	6.616	-0.002	96	25044	5.00	4.85	
56 Carbon tetrachloride	117	6.718	6.719	-0.001	94	13013	5.00	4.95	
55 1,1-Dichloropropene	75	6.724	6.731	-0.007	91	16668	5.00	4.88	
57 Isobutyl alcohol	41	6.918	6.926	-0.008	70	9663	125.0	125.1	
58 Benzene	78	6.943	6.944	-0.001	97	55246	5.00	5.52	
59 1,2-Dichloroethane	62	7.022	7.023	-0.001	95	19231	5.00	5.56	
62 n-Heptane	43	7.314	7.309	0.005	93	19899	5.00	5.32	
64 Trichloroethene	130	7.679	7.674	0.005	92	13948	5.00	5.70	
66 Methylcyclohexane	83	7.916	7.918	-0.002	93	17237	5.00	4.47	
67 1,2-Dichloropropane	63	7.947	7.954	-0.007	90	15440	5.00	5.88	
70 1,4-Dioxane	88	8.026	8.027	-0.001	42	1429	100.0	79.0	
68 Dibromomethane	93	8.026	8.039	-0.013	95	7003	5.00	5.26	
71 Dichlorobromomethane	83	8.232	8.234	-0.002	93	12926	5.00	4.90	
74 cis-1,3-Dichloropropene	75	8.664	8.678	-0.014	65	13234	5.00	4.29	
75 4-Methyl-2-pentanone (MIBK)	43	8.823	8.830	-0.007	97	52387	25.0	22.1	
76 Toluene	91	9.005	9.006	-0.001	97	53527	5.00	5.63	
77 trans-1,3-Dichloropropene	75	9.248	9.250	-0.002	96	10582	5.00	4.26	
78 Ethyl methacrylate	69	9.315	9.311	0.004	94	9690	5.00	4.04	
79 1,1,2-Trichloroethane	97	9.449	9.444	0.005	93	9469	5.00	5.23	
80 Tetrachloroethene	164	9.522	9.517	0.005	93	10935	5.00	5.92	
81 1,3-Dichloropropane	76	9.607	9.603	0.004	99	19141	5.00	5.70	
82 2-Hexanone	43	9.662	9.657	0.005	97	39604	25.0	23.2	
84 Chlorodibromomethane	129	9.814	9.816	-0.002	89	7357	5.00	4.70	
85 Ethylene Dibromide	107	9.930	9.931	-0.001	99	9378	5.00	5.38	
86 3-Chlorobenzotrifluoride	180	10.392	10.387	0.005	56	18393	5.00	6.02	
87 Chlorobenzene	112	10.416	10.418	-0.002	94	35900	5.00	5.86	
88 4-Chlorobenzotrifluoride	180	10.477	10.479	-0.002	96	16914	5.00	5.85	
89 1,1,1,2-Tetrachloroethane	131	10.508	10.509	-0.001	87	10787	5.00	5.40	
90 Ethylbenzene	106	10.514	10.515	-0.001	98	15563	5.00	4.79	
91 m-Xylene & p-Xylene	106	10.648	10.649	-0.001	0	18709	5.00	4.70	
92 o-Xylene	106	11.025	11.026	-0.001	97	17177	5.00	4.54	
93 Styrene	104	11.049	11.051	-0.002	93	27953	5.00	4.46	
94 Bromoform	173	11.226	11.233	-0.007	96	4507	5.00	5.04	
96 2-Chlorobenzotrifluoride	180	11.305	11.294	0.011	92	17186	5.00	5.71	
97 Isopropylbenzene	105	11.396	11.397	-0.001	96	41948	5.00	4.53	
100 Bromobenzene	156	11.712	11.708	0.004	96	12648	5.00	5.24	
99 1,1,2,2-Tetrachloroethane	83	11.712	11.708	0.004	82	14088	5.00	5.77	
102 trans-1,4-Dichloro-2-buten	53	11.749	11.744	0.005	58	4099	5.00	4.70	
101 1,2,3-Trichloropropane	110	11.761	11.762	-0.001	85	4305	5.00	5.41	
103 N-Propylbenzene	120	11.810	11.811	-0.001	99	12643	5.00	4.58	
104 2-Chlorotoluene	126	11.895	11.902	-0.007	95	10430	5.00	4.44	
105 3-Chlorotoluene	126	11.968	11.963	0.005	96	11617	5.00	4.82	

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	11.992	11.993	-0.001	95	33229	5.00	4.26	
107 4-Chlorotoluene	126	12.022	12.024	-0.002	98	12133	5.00	4.70	
108 tert-Butylbenzene	119	12.308	12.310	-0.002	96	26338	5.00	4.15	
110 1,2,4-Trimethylbenzene	105	12.369	12.371	-0.002	96	32428	5.00	4.15	
111 1,2-dichloro-4-(trifluorom	214	12.406	12.413	-0.007	95	13115	5.00	6.02	
112 sec-Butylbenzene	105	12.533	12.535	-0.002	96	39041	5.00	4.36	
113 1,3-Dichlorobenzene	146	12.655	12.650	0.005	94	22108	5.00	5.15	
114 4-Isopropyltoluene	119	12.692	12.687	0.005	94	30909	5.00	4.08	
115 1,4-Dichlorobenzene	146	12.752	12.754	-0.002	94	25851	5.00	5.79	
116 2,4-Dichloro-1-(trifluorom	214	12.783	12.778	0.005	92	11477	5.00	5.68	
118 2,5-Dichlorobenzotrifluori	214	12.825	12.821	0.004	0	12582	5.00	5.77	
120 n-Butylbenzene	91	13.099	13.101	-0.002	98	27472	5.00	4.24	
121 1,2-Dichlorobenzene	146	13.111	13.113	-0.002	97	22973	5.00	5.72	
122 1,2-Dibromo-3-Chloropropan	75	13.920	13.904	0.016	1	1507	5.00	4.57	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.048	14.044	0.004	0	31847	15.0	13.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.462	14.463	-0.001	0	19801	10.0	9.06	
126 1,2,4-Trichlorobenzene	180	14.723	14.725	-0.002	94	7500	5.00	4.80	
127 Hexachlorobutadiene	225	14.876	14.871	0.005	90	3919	5.00	5.21	
128 Naphthalene	128	14.991	14.993	-0.002	96	17192	5.00	4.28	
129 1,2,3-Trichlorobenzene	180	15.216	15.218	-0.002	92	6907	5.00	5.46	
131 2,4,5-Trichlorotoluene	159	15.989	15.990	-0.001	0	2382	5.00	5.22	
130 2,3,6-Trichlorotoluene	159	16.092	16.094	-0.002	87	1485	5.00	3.53	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		10.0	9.24	
S 134 1,2-Dichloroethene, Total	96				0		10.0	11.1	
S 135 1,3-Dichloropropene, Total	1				0		10.0	8.55	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOA8260VOAPRI_00139	Amount Added: 0.20	Units: uL	
voaWEE1stRest_00001	Amount Added: 0.20	Units: uL	
VOAVAPRI_00006	Amount Added: 0.20	Units: uL	
voaWKet1 Rest_00001	Amount Added: 0.80	Units: uL	
VOAACROLEINPR_00006	Amount Added: 4.00	Units: uL	
VOA8260SURRE_00040	Amount Added: 0.20	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826006.D

Injection Date: 26-Aug-2015 15:04:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD1

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

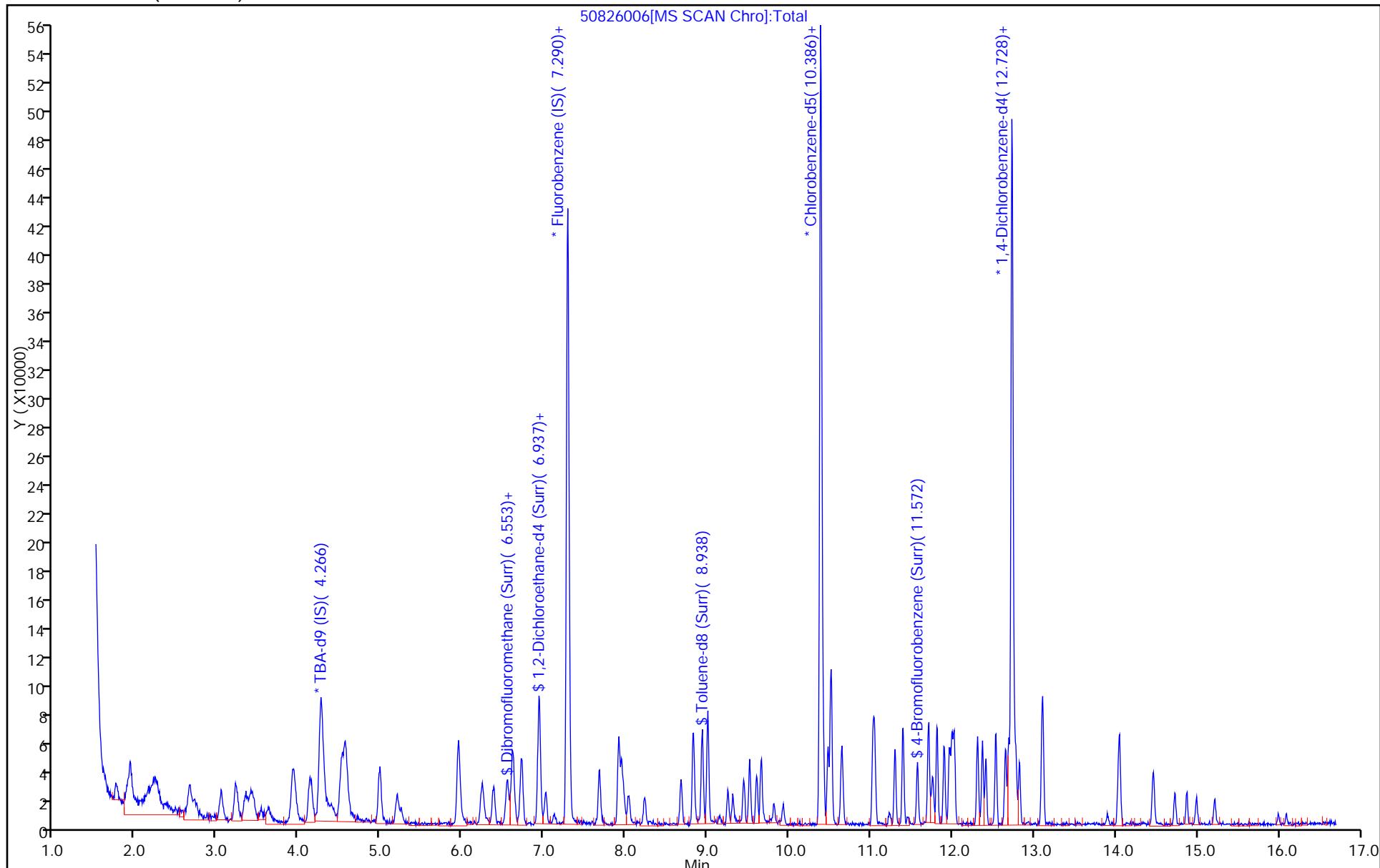
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





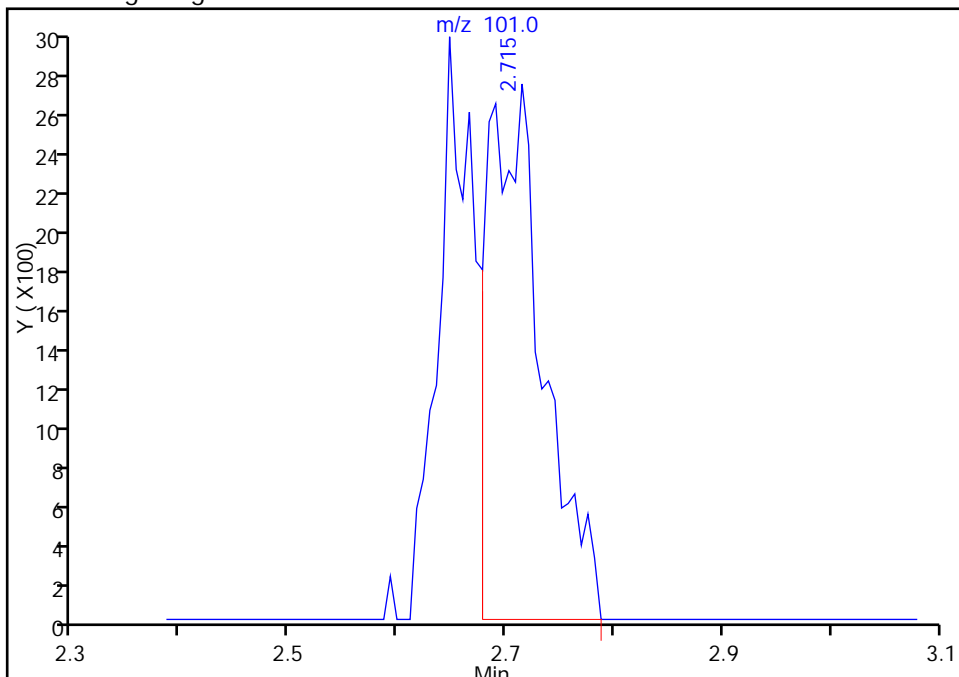
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826006.D  
Injection Date: 26-Aug-2015 15:04:30 Instrument ID: CHHP5  
Lims ID: IC VSTD1  
Client ID:  
Operator ID: 001562 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

18 Trichlorofluoromethane, CAS: 75-69-4

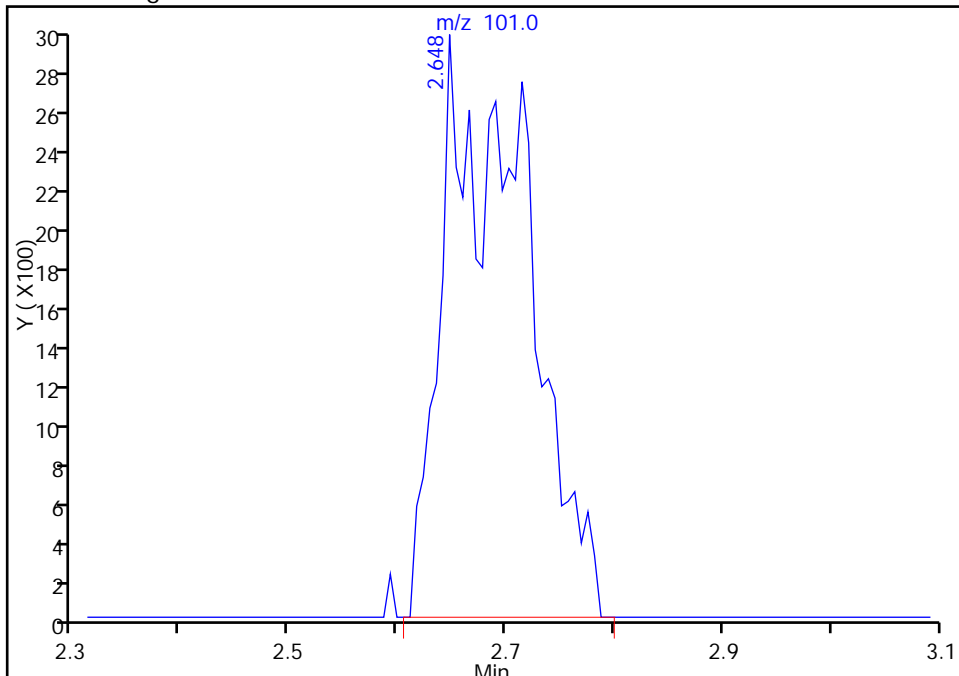
RT: 2.71  
Area: 9760  
Amount: 4.111403  
Amount Units: ng

Processing Integration Results



RT: 2.65  
Area: 16013  
Amount: 5.602773  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 27-Aug-2015 10:07:27  
Audit Action: Manually Integrated  
Audit Reason: Incomplete Integration

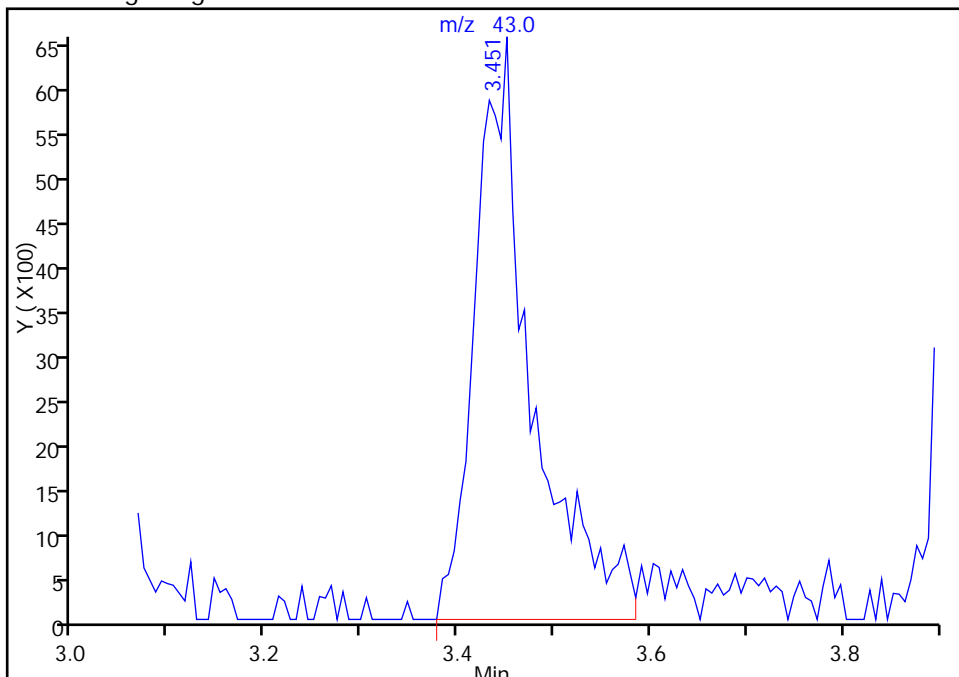
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826006.D  
Injection Date: 26-Aug-2015 15:04:30 Instrument ID: CHHP5  
Lims ID: IC VSTD1  
Client ID:  
Operator ID: 001562 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

24 Acetone, CAS: 67-64-1

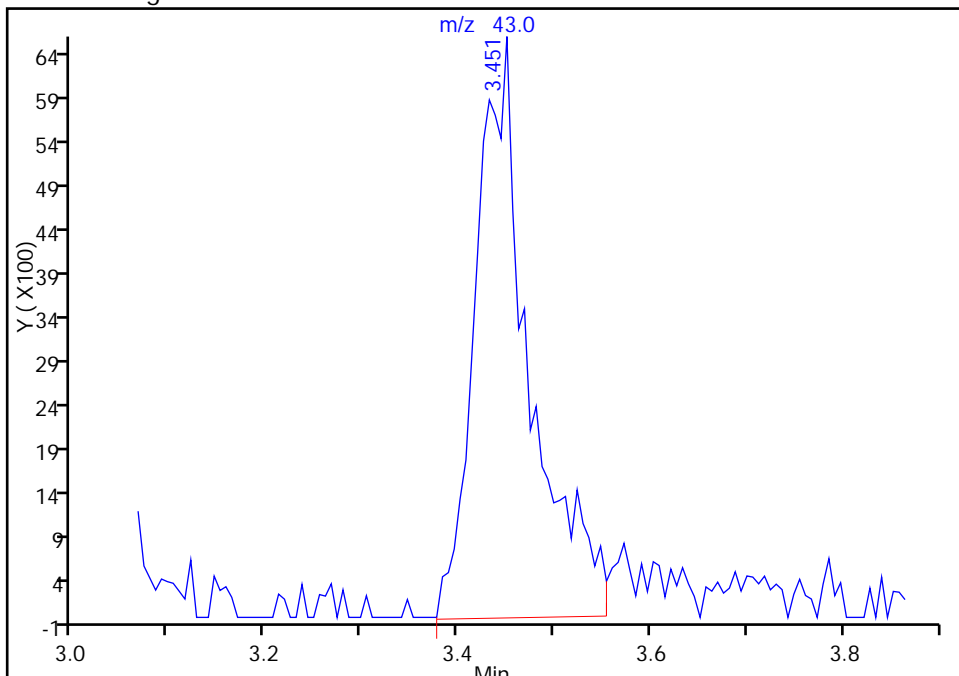
RT: 3.45  
Area: 26617  
Amount: 32.323853  
Amount Units: ng

Processing Integration Results



RT: 3.45  
Area: 25628  
Amount: 31.310834  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 27-Aug-2015 10:07:27  
Audit Action: Manually Integrated  
Audit Reason: Peak Tail

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826008.D  
 Lims ID: IC VSTD5  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 26-Aug-2015 15:28:30 ALS Bottle#: 7 Worklist Smp#: 8  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD5  
 Misc. Info.: 180-0008300-008  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 11:47:16 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond

Date: 27-Aug-2015 10:07:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.260	4.267	-0.007	0	150907	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.290	0.000	97	426232	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.387	-0.001	89	101235	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.729	-0.001	96	159073	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.566	6.560	0.006	92	54310	25.0	25.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.931	0.000	0	75876	25.0	26.4	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.939	-0.001	95	209810	25.0	26.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.573	-0.001	85	76038	25.0	25.8	
11 Dichlorodifluoromethane	85	1.608	1.614	-0.006	99	63359	25.0	26.3	
12 Chloromethane	50	1.760	1.766	-0.006	99	96975	25.0	27.4	
13 Vinyl chloride	62	1.893	1.894	-0.001	97	84746	25.0	27.0	
14 Butadiene	39	1.930	1.937	-0.007	97	101243	25.0	27.3	
15 Bromomethane	94	2.234	2.247	-0.013	88	33586	25.0	26.3	
16 Chloroethane	64	2.386	2.387	-0.001	99	50718	25.0	26.8	
17 Dichlorofluoromethane	67	2.660	2.661	-0.001	97	111107	25.0	27.7	
18 Trichlorofluoromethane	101	2.690	2.667	0.023	87	81291	25.0	27.1	
20 Ethyl ether	59	3.043	3.050	-0.007	93	70836	25.0	25.5	
21 Acrolein	56	3.226	3.232	-0.006	99	52087	125.0	125.6	
22 1,1-Dichloroethene	96	3.347	3.348	-0.001	93	60024	25.0	25.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.414	3.403	0.011	94	67283	25.0	26.7	
24 Acetone	43	3.451	3.445	0.006	100	51703	50.0	60.1	
25 Iodomethane	142	3.536	3.543	-0.007	98	89056	25.0	25.2	
26 Carbon disulfide	76	3.627	3.628	-0.001	100	126552	25.0	23.0	
28 3-Chloro-1-propene	76	3.913	3.920	-0.007	86	31974	25.0	23.8	
30 Methyl acetate	43	3.938	3.938	0.000	99	347746	125.0	135.3	
31 Methylene Chloride	84	4.144	4.139	0.005	97	79338	25.0	25.8	
32 2-Methyl-2-propanol	59	4.400	4.407	-0.007	87	39038	250.0	229.8	
33 Acrylonitrile	53	4.522	4.522	0.000	100	329204	250.0	264.0	
34 trans-1,2-Dichloroethene	96	4.564	4.565	-0.001	97	66301	25.0	25.7	
35 Methyl tert-butyl ether	73	4.576	4.577	-0.001	95	147150	25.0	24.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.997	-0.007	95	109198	25.0	25.2	
37 1,1-Dichloroethane	63	5.203	5.204	-0.001	96	128072	25.0	25.2	
38 Vinyl acetate	43	5.252	5.252	0.000	97	92081	25.0	24.2	
45 cis-1,2-Dichloroethene	96	5.951	5.952	-0.001	86	69819	25.0	25.4	
44 2,2-Dichloropropane	77	5.945	5.952	-0.007	58	48880	25.0	24.0	
46 2-Butanone (MEK)	43	5.957	5.964	-0.007	66	68384	50.0	52.9	
49 Chlorobromomethane	128	6.237	6.238	-0.001	91	31931	25.0	26.4	
51 Tetrahydrofuran	42	6.255	6.250	0.005	91	51589	50.0	49.8	
52 Chloroform	83	6.377	6.384	-0.007	96	113670	25.0	25.9	
53 1,1,1-Trichloroethane	97	6.541	6.542	-0.001	95	81030	25.0	25.0	
54 Cyclohexane	56	6.614	6.615	-0.001	96	134937	25.0	24.9	
56 Carbon tetrachloride	117	6.712	6.718	-0.006	95	69375	25.0	25.1	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	91	91438	25.0	25.5	
57 Isobutyl alcohol	41	6.925	6.925	-0.001	78	48239	625.0	594.3	
58 Benzene	78	6.943	6.943	0.000	98	287091	25.0	27.3	
59 1,2-Dichloroethane	62	7.022	7.022	0.000	96	95482	25.0	26.3	
62 n-Heptane	43	7.308	7.308	0.000	93	97699	25.0	24.9	
64 Trichloroethene	130	7.673	7.679	-0.006	96	64418	25.0	25.1	
66 Methylcyclohexane	83	7.916	7.917	-0.001	96	97305	25.0	24.0	
67 1,2-Dichloropropane	63	7.953	7.947	0.006	94	67479	25.0	24.5	
70 1,4-Dioxane	88	8.032	8.026	0.006	40	9374	500.0	493.0	
68 Dibromomethane	93	8.038	8.038	0.000	94	37187	25.0	26.6	
71 Dichlorobromomethane	83	8.232	8.233	-0.001	97	67441	25.0	24.4	
74 cis-1,3-Dichloropropene	75	8.677	8.677	0.000	88	70847	25.0	21.8	
75 4-Methyl-2-pentanone (MIBK)	43	8.829	8.829	0.000	99	122590	50.0	49.1	
76 Toluene	91	9.005	9.006	-0.001	98	281285	25.0	28.1	
77 trans-1,3-Dichloropropene	75	9.248	9.249	-0.001	99	61867	25.0	23.7	
78 Ethyl methacrylate	69	9.309	9.310	-0.001	91	57962	25.0	22.9	
79 1,1,2-Trichloroethane	97	9.443	9.444	-0.001	94	55277	25.0	29.0	
80 Tetrachloroethene	164	9.516	9.517	-0.001	96	53495	25.0	27.5	
81 1,3-Dichloropropane	76	9.601	9.602	-0.001	98	95569	25.0	27.0	
82 2-Hexanone	43	9.656	9.657	-0.001	98	91984	50.0	51.1	
84 Chlorodibromomethane	129	9.814	9.815	-0.001	91	38492	25.0	23.3	
85 Ethylene Dibromide	107	9.930	9.930	0.000	95	49971	25.0	27.2	
86 3-Chlorobenzotrifluoride	180	10.386	10.387	-0.001	69	87568	25.0	27.2	
87 Chlorobenzene	112	10.416	10.417	-0.001	94	177451	25.0	27.5	
88 4-Chlorobenzotrifluoride	180	10.477	10.478	-0.001	96	83430	25.0	27.4	
89 1,1,1,2-Tetrachloroethane	131	10.508	10.508	0.000	89	55507	25.0	26.4	
90 Ethylbenzene	106	10.514	10.514	0.000	99	88753	25.0	25.9	
91 m-Xylene & p-Xylene	106	10.648	10.648	0.000	0	107918	25.0	25.7	
92 o-Xylene	106	11.031	11.025	0.006	98	99302	25.0	24.9	
93 Styrene	104	11.049	11.050	-0.001	94	173558	25.0	26.3	
94 Bromoform	173	11.232	11.232	0.000	95	21829	25.0	23.2	
96 2-Chlorobenzotrifluoride	180	11.299	11.299	0.000	97	88525	25.0	27.9	
97 Isopropylbenzene	105	11.396	11.396	0.000	97	258721	25.0	26.5	
100 Bromobenzene	156	11.712	11.707	0.005	96	66130	25.0	24.2	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.707	-0.001	78	70831	25.0	27.5	
102 trans-1,4-Dichloro-2-buten	53	11.743	11.743	0.000	69	22318	25.0	22.6	
101 1,2,3-Trichloropropane	110	11.761	11.762	-0.001	87	23273	25.0	25.8	
103 N-Propylbenzene	120	11.810	11.810	0.000	99	74204	25.0	23.7	
104 2-Chlorotoluene	126	11.895	11.901	-0.006	95	65813	25.0	24.8	
105 3-Chlorotoluene	126	11.962	11.968	-0.006	95	68954	25.0	25.3	

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	11.992	11.993	-0.001	95	229921	25.0	26.0	
107 4-Chlorotoluene	126	12.022	12.023	-0.001	98	77519	25.0	26.5	
108 tert-Butylbenzene	119	12.308	12.309	-0.001	95	173217	25.0	24.1	
110 1,2,4-Trimethylbenzene	105	12.369	12.370	-0.001	98	227690	25.0	25.7	
111 1,2-dichloro-4-(trifluorom	214	12.412	12.412	0.000	98	61289	25.0	24.8	
112 sec-Butylbenzene	105	12.533	12.534	-0.001	95	258745	25.0	25.5	
113 1,3-Dichlorobenzene	146	12.649	12.650	-0.001	96	127273	25.0	26.2	
114 4-Isopropyltoluene	119	12.692	12.692	0.000	97	215293	25.0	25.1	
115 1,4-Dichlorobenzene	146	12.752	12.753	-0.001	95	133066	25.0	26.3	
116 2,4-Dichloro-1-(trifluorom	214	12.777	12.777	0.000	93	59316	25.0	25.9	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.820	-0.001	0	61489	25.0	24.9	
120 n-Butylbenzene	91	13.099	13.100	-0.001	98	181007	25.0	24.7	
121 1,2-Dichlorobenzene	146	13.111	13.112	-0.001	95	119403	25.0	26.3	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.897	0.005	70	9637	25.0	25.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.049	-0.007	0	187206	75.0	72.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.462	14.463	-0.001	0	120746	50.0	48.8	
126 1,2,4-Trichlorobenzene	180	14.730	14.724	0.006	92	45439	25.0	25.7	
127 Hexachlorobutadiene	225	14.870	14.870	0.000	95	23516	25.0	27.6	
128 Naphthalene	128	14.991	14.992	-0.001	98	101055	25.0	22.2	
129 1,2,3-Trichlorobenzene	180	15.210	15.217	-0.007	93	35802	25.0	25.0	
131 2,4,5-Trichlorotoluene	159	15.995	15.990	0.005	0	11540	25.0	22.3	
130 2,3,6-Trichlorotoluene	159	16.092	16.093	-0.001	92	10524	25.0	22.1	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		50.0	50.6	
S 134 1,2-Dichloroethene, Total	96				0		50.0	51.1	
S 135 1,3-Dichloropropene, Total	1				0		50.0	45.5	

### QC Flag Legend

#### Processing Flags

ND - Not Detected or Marked ND

#### Reagents:

VOA8260SURR_00040	Amount Added: 1.00	Units: uL	
VOA8260VOAPRI_00139	Amount Added: 1.00	Units: uL	
voaWEE1stRest_00001	Amount Added: 1.00	Units: uL	
voaWKet1 Rest_00001	Amount Added: 1.00	Units: uL	
VOAACROLEINPR_00006	Amount Added: 5.00	Units: uL	
VOAVAPRI_00006	Amount Added: 1.00	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826008.D

Injection Date: 26-Aug-2015 15:28:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD5

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

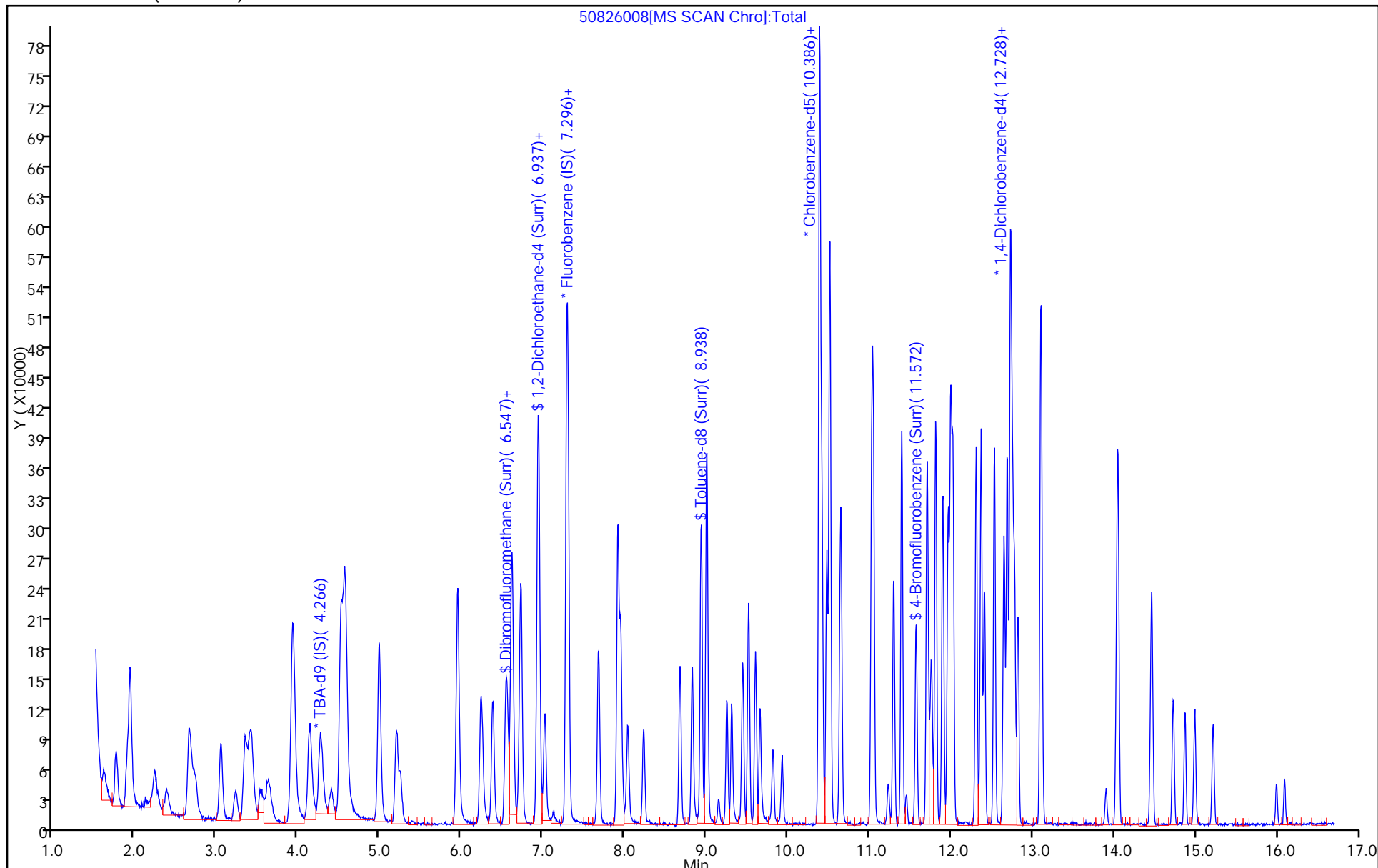
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826009.D  
 Lims ID: ICIS VSTD10  
 Client ID:  
 Sample Type: ICIS Calib Level: 3  
 Inject. Date: 26-Aug-2015 15:52:30 ALS Bottle#: 8 Worklist Smp#: 9  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: ICIS VSTD10  
 Misc. Info.: 180-0008300-009  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 12:15:57 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond

Date: 27-Aug-2015 08:52:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.274	4.274	0.000	0	157569	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.291	7.291	0.000	98	461146	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.387	0.000	88	108412	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.730	0.000	96	172635	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.567	6.567	0.000	94	112824	50.0	49.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.938	6.938	0.000	0	155346	50.0	49.9	
\$ 7 Toluene-d8 (Surr)	98	8.933	8.933	0.000	94	471382	50.0	56.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.574	11.574	0.000	86	171548	50.0	54.4	
11 Dichlorodifluoromethane	85	1.627	1.627	0.000	99	139988	50.0	53.7	
12 Chloromethane	50	1.761	1.761	0.000	100	189967	50.0	49.7	
13 Vinyl chloride	62	1.901	1.901	0.000	97	181809	50.0	53.6	
14 Butadiene	39	1.931	1.931	0.000	97	213171	50.0	53.2	
15 Bromomethane	94	2.236	2.236	0.000	92	58568	50.0	42.4	
16 Chloroethane	64	2.376	2.376	0.000	99	99329	50.0	48.5	
17 Dichlorofluoromethane	67	2.661	2.661	0.000	97	232009	50.0	53.4	
18 Trichlorofluoromethane	101	2.661	2.661	0.000	43	174036	50.0	53.6	
20 Ethyl ether	59	3.051	3.051	0.000	97	145899	50.0	48.5	
21 Acrolein	56	3.233	3.233	0.000	98	66358	150.0	147.9	
22 1,1-Dichloroethene	96	3.355	3.355	0.000	95	132602	50.0	51.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.416	3.416	0.000	94	141996	50.0	52.2	
24 Acetone	43	3.452	3.452	0.000	99	88342	100.0	94.9	
25 Iodomethane	142	3.556	3.556	0.000	98	190440	50.0	49.8	
26 Carbon disulfide	76	3.635	3.635	0.000	100	288788	50.0	48.4	
28 3-Chloro-1-propene	76	3.921	3.921	0.000	88	70192	50.0	48.3	
30 Methyl acetate	43	3.945	3.945	0.000	99	664608	250.0	239.0	
31 Methylene Chloride	84	4.152	4.152	0.000	97	150258	50.0	49.8	
32 2-Methyl-2-propanol	59	4.413	4.413	0.000	87	81932	500.0	462.0	
33 Acrylonitrile	53	4.517	4.517	0.000	99	693478	500.0	514.1	
34 trans-1,2-Dichloroethene	96	4.566	4.566	0.000	96	141577	50.0	50.8	
35 Methyl tert-butyl ether	73	4.584	4.584	0.000	95	302403	50.0	46.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.991	4.991	0.000	95	237492	50.0	50.7	
37 1,1-Dichloroethane	63	5.198	5.198	0.000	96	273423	50.0	49.8	
38 Vinyl acetate	43	5.253	5.253	0.000	97	191017	50.0	46.3	
45 cis-1,2-Dichloroethene	96	5.953	5.953	0.000	86	146208	50.0	49.1	
44 2,2-Dichloropropane	77	5.946	5.946	0.000	60	109416	50.0	49.7	
46 2-Butanone (MEK)	43	5.959	5.959	0.000	73	136667	100.0	97.8	
49 Chlorobromomethane	128	6.238	6.238	0.000	91	62915	50.0	48.1	
51 Tetrahydrofuran	42	6.257	6.257	0.000	94	107444	100.0	95.8	
52 Chloroform	83	6.385	6.385	0.000	96	232542	50.0	49.0	
53 1,1,1-Trichloroethane	97	6.549	6.549	0.000	96	178131	50.0	50.8	
54 Cyclohexane	56	6.616	6.616	0.000	96	302702	50.0	51.5	
56 Carbon tetrachloride	117	6.719	6.719	0.000	95	148991	50.0	49.9	
55 1,1-Dichloropropene	75	6.731	6.731	0.000	91	198075	50.0	51.0	
57 Isobutyl alcohol	41	6.926	6.926	0.000	79	113924	1250.0	1297.3	
58 Benzene	78	6.944	6.944	0.000	98	580241	50.0	51.0	
59 1,2-Dichloroethane	62	7.023	7.023	0.000	96	191991	50.0	48.8	
62 n-Heptane	43	7.309	7.309	0.000	96	215218	50.0	50.6	
64 Trichloroethene	130	7.674	7.674	0.000	97	138404	50.0	49.8	
66 Methylcyclohexane	83	7.918	7.918	0.000	96	222858	50.0	50.8	
67 1,2-Dichloropropane	63	7.954	7.954	0.000	95	144895	50.0	48.6	
70 1,4-Dioxane	88	8.027	8.027	0.000	48	20164	1000.0	980.3	
68 Dibromomethane	93	8.039	8.039	0.000	96	74626	50.0	49.3	
71 Dichlorobromomethane	83	8.234	8.234	0.000	98	141423	50.0	47.2	
74 cis-1,3-Dichloropropene	75	8.678	8.678	0.000	90	159644	50.0	45.5	
75 4-Methyl-2-pentanone (MIBK)	43	8.830	8.830	0.000	99	267134	100.0	100.0	
76 Toluene	91	9.006	9.006	0.000	98	594334	50.0	55.4	
77 trans-1,3-Dichloropropene	75	9.250	9.250	0.000	98	136231	50.0	48.6	
78 Ethyl methacrylate	69	9.311	9.311	0.000	94	132749	50.0	49.0	
79 1,1,2-Trichloroethane	97	9.444	9.444	0.000	94	105440	50.0	51.6	
80 Tetrachloroethene	164	9.517	9.517	0.000	95	111146	50.0	53.3	
81 1,3-Dichloropropane	76	9.603	9.603	0.000	98	194887	50.0	51.4	
82 2-Hexanone	43	9.657	9.657	0.000	99	195734	100.0	101.5	
84 Chlorodibromomethane	129	9.816	9.816	0.000	89	89414	50.0	50.6	
85 Ethylene Dibromide	107	9.931	9.931	0.000	100	100600	50.0	51.1	
86 3-Chlorobenzotrifluoride	180	10.387	10.387	0.000	86	189078	50.0	54.8	
87 Chlorobenzene	112	10.418	10.418	0.000	93	364174	50.0	52.7	
88 4-Chlorobenzotrifluoride	180	10.479	10.479	0.000	96	177807	50.0	54.5	
89 1,1,1,2-Tetrachloroethane	131	10.509	10.509	0.000	91	112884	50.0	50.1	
90 Ethylbenzene	106	10.515	10.515	0.000	99	199030	50.0	54.3	
91 m-Xylene & p-Xylene	106	10.649	10.649	0.000	0	244588	50.0	54.5	
92 o-Xylene	106	11.026	11.026	0.000	97	235252	50.0	55.1	
93 Styrene	104	11.051	11.051	0.000	95	381888	50.0	54.0	
94 Bromoform	173	11.233	11.233	0.000	96	48771	50.0	48.4	
96 2-Chlorobenzotrifluoride	180	11.294	11.294	0.000	96	184654	50.0	54.4	
97 Isopropylbenzene	105	11.397	11.397	0.000	97	601591	50.0	57.5	
100 Bromobenzene	156	11.708	11.708	0.000	94	144660	50.0	48.8	
99 1,1,2,2-Tetrachloroethane	83	11.708	11.708	0.000	77	148796	50.0	54.0	
102 trans-1,4-Dichloro-2-buten	53	11.744	11.744	0.000	79	49630	50.0	46.3	
101 1,2,3-Trichloropropane	110	11.762	11.762	0.000	88	46443	50.0	47.5	
103 N-Propylbenzene	120	11.811	11.811	0.000	99	174426	50.0	51.4	
104 2-Chlorotoluene	126	11.902	11.902	0.000	96	147328	50.0	51.1	
105 3-Chlorotoluene	126	11.963	11.963	0.000	96	151211	50.0	51.0	



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	11.993	11.993	0.000	95	517168	50.0	54.0	
107 4-Chlorotoluene	126	12.024	12.024	0.000	98	159410	50.0	50.2	
108 tert-Butylbenzene	119	12.310	12.310	0.000	95	406052	50.0	52.1	
110 1,2,4-Trimethylbenzene	105	12.371	12.371	0.000	98	515539	50.0	53.7	
111 1,2-dichloro-4-(trifluorom	214	12.413	12.413	0.000	98	140073	50.0	52.3	
112 sec-Butylbenzene	105	12.535	12.535	0.000	95	604638	50.0	55.0	
113 1,3-Dichlorobenzene	146	12.650	12.650	0.000	98	273757	50.0	51.9	
114 4-Isopropyltoluene	119	12.687	12.687	0.000	97	504672	50.0	54.2	
115 1,4-Dichlorobenzene	146	12.754	12.754	0.000	93	277292	50.0	50.5	
116 2,4-Dichloro-1-(trifluorom	214	12.778	12.778	0.000	96	134729	50.0	54.3	
118 2,5-Dichlorobenzotrifluori	214	12.821	12.821	0.000	0	138171	50.0	51.5	
120 n-Butylbenzene	91	13.101	13.101	0.000	98	432555	50.0	54.3	
121 1,2-Dichlorobenzene	146	13.113	13.113	0.000	95	257985	50.0	52.3	
122 1,2-Dibromo-3-Chloropropan	75	13.904	13.904	0.000	76	20608	50.0	50.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.044	14.044	0.000	0	495585	150.0	176.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.463	14.463	0.000	0	328345	100.0	122.3	
126 1,2,4-Trichlorobenzene	180	14.725	14.725	0.000	93	119069	50.0	62.1	
127 Hexachlorobutadiene	225	14.871	14.871	0.000	97	58574	50.0	63.4	
128 Naphthalene	128	14.993	14.993	0.000	97	301738	50.0	61.2	
129 1,2,3-Trichlorobenzene	180	15.218	15.218	0.000	95	100055	50.0	64.4	
131 2,4,5-Trichlorotoluene	159	15.990	15.990	0.000	0	37716	50.0	67.3	
130 2,3,6-Trichlorotoluene	159	16.094	16.094	0.000	94	36592	50.0	70.8	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	109.6	
S 134 1,2-Dichloroethene, Total	96				0		100.0	99.8	
S 135 1,3-Dichloropropene, Total	1				0		100.0	94.1	

### QC Flag Legend

#### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOAACROLEINPR_00006	Amount Added: 6.00	Units: uL	
VOAVAPRI_00006	Amount Added: 2.00	Units: uL	
VOA8260SURR_00040	Amount Added: 2.00	Units: uL	
VOA8260VOAPRI_00139	Amount Added: 2.00	Units: uL	
voaWEE1stRest_00001	Amount Added: 2.00	Units: uL	
voaWKet1 Rest_00001	Amount Added: 2.00	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826009.D

Injection Date: 26-Aug-2015 15:52:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: ICIS VSTD10

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

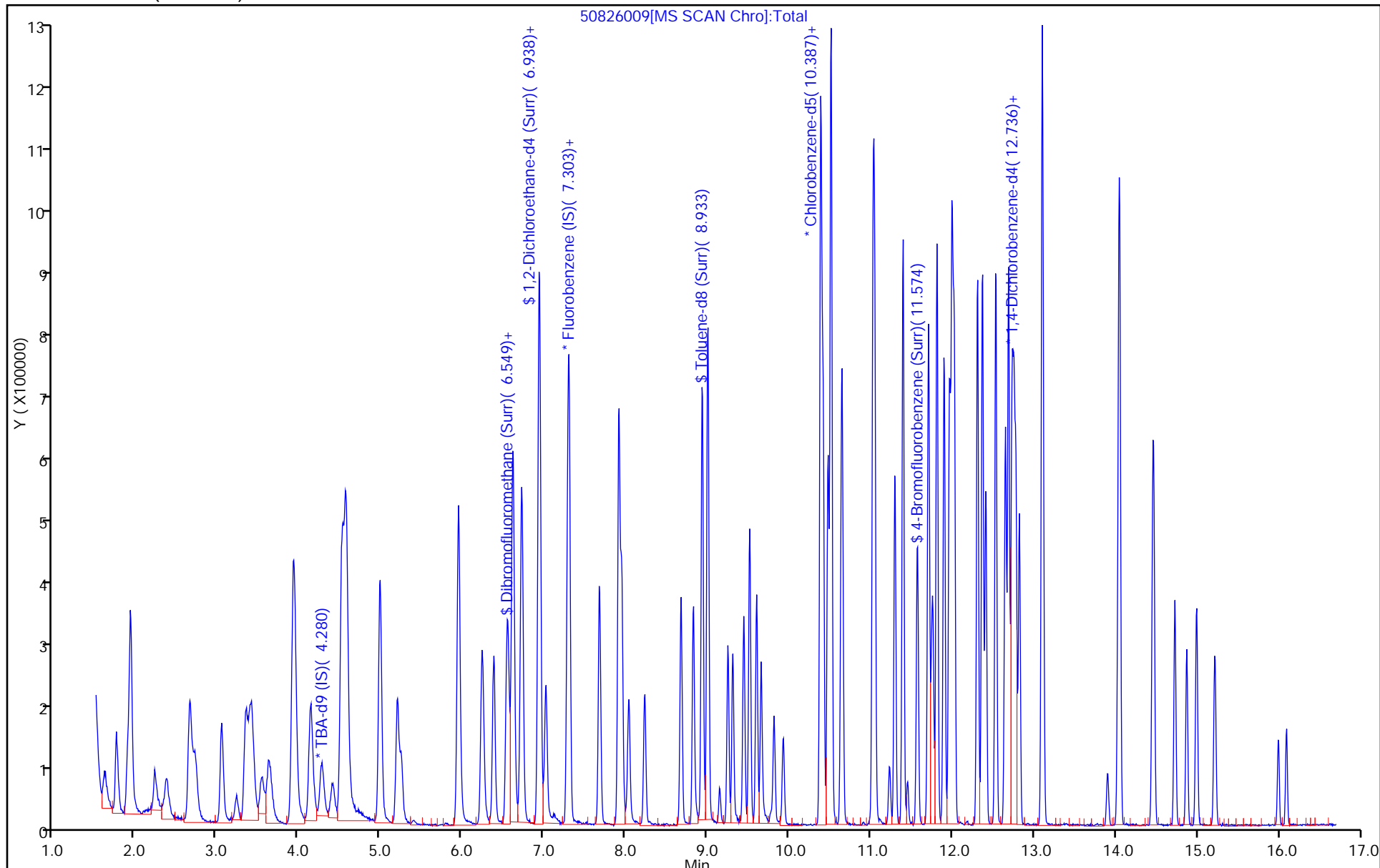
Dil. Factor: 1.0000

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\20150826-8300.b\50826010.D  
 Lims ID: IC VSTD15  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 26-Aug-2015 16:16:30 ALS Bottle#: 9 Worklist Smp#: 10  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD15  
 Misc. Info.: 180-0008300-010  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 11:49:37 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond

Date: 27-Aug-2015 10:26:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.267	4.267	0.000	0	149384	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.290	0.000	98	491519	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.387	0.000	87	118747	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.729	12.729	0.000	96	175441	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.560	6.560	0.000	93	168602	75.0	69.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.931	6.931	0.000	0	228530	75.0	68.9	
\$ 7 Toluene-d8 (Surr)	98	8.939	8.939	0.000	95	679876	75.0	74.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.573	11.573	0.000	87	257596	75.0	74.5	
11 Dichlorodifluoromethane	85	1.614	1.614	0.000	99	195493	75.0	70.4	
12 Chloromethane	50	1.766	1.766	0.000	99	279657	75.0	68.6	
13 Vinyl chloride	62	1.894	1.894	0.000	98	253941	75.0	70.2	
14 Butadiene	39	1.937	1.937	0.000	95	291582	75.0	68.3	
15 Bromomethane	94	2.247	2.247	0.000	90	118541	75.0	80.5	
16 Chloroethane	64	2.387	2.387	0.000	99	155578	75.0	71.3	
17 Dichlorofluoromethane	67	2.661	2.661	0.000	99	318608	75.0	68.8	
18 Trichlorofluoromethane	101	2.667	2.667	0.000	59	241309	75.0	69.7	
20 Ethyl ether	59	3.050	3.050	0.000	98	219194	75.0	68.3	
21 Acrolein	56	3.232	3.232	0.000	99	75936	175.0	158.8	
22 1,1-Dichloroethene	96	3.348	3.348	0.000	94	192998	75.0	70.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.403	3.403	0.000	94	204297	75.0	70.4	
24 Acetone	43	3.445	3.445	0.000	98	125942	150.0	127.0	
25 Iodomethane	142	3.543	3.543	0.000	99	284793	75.0	69.8	
26 Carbon disulfide	76	3.628	3.628	0.000	100	436105	75.0	68.6	
28 3-Chloro-1-propene	76	3.920	3.920	0.000	88	108440	75.0	69.9	
30 Methyl acetate	43	3.938	3.938	0.000	99	1027560	375.0	346.7	
31 Methylene Chloride	84	4.139	4.139	0.000	97	225319	75.0	72.5	
32 2-Methyl-2-propanol	59	4.407	4.407	0.000	87	122262	750.0	727.2	
33 Acrylonitrile	53	4.522	4.522	0.000	98	978697	750.0	680.6	
34 trans-1,2-Dichloroethene	96	4.565	4.565	0.000	95	204201	75.0	68.7	
35 Methyl tert-butyl ether	73	4.577	4.577	0.000	96	477236	75.0	69.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.997	4.997	0.000	96	347025	75.0	69.5	
37 1,1-Dichloroethane	63	5.204	5.204	0.000	97	407919	75.0	69.7	
38 Vinyl acetate	43	5.252	5.252	0.000	97	303320	75.0	69.0	
45 cis-1,2-Dichloroethene	96	5.952	5.952	0.000	84	223289	75.0	70.3	
44 2,2-Dichloropropane	77	5.952	5.952	0.000	58	164171	75.0	70.0	
46 2-Butanone (MEK)	43	5.964	5.964	0.000	78	210830	150.0	141.5	
49 Chlorobromomethane	128	6.238	6.238	0.000	92	99282	75.0	71.2	
51 Tetrahydrofuran	42	6.250	6.250	0.000	91	153971	150.0	128.8	
52 Chloroform	83	6.384	6.384	0.000	97	359318	75.0	71.0	
53 1,1,1-Trichloroethane	97	6.542	6.542	0.000	96	264507	75.0	70.7	
54 Cyclohexane	56	6.615	6.615	0.000	97	451893	75.0	72.2	
56 Carbon tetrachloride	117	6.718	6.718	0.000	96	226405	75.0	71.1	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	92	295676	75.0	71.5	
57 Isobutyl alcohol	41	6.925	6.925	0.000	92	149085	1875.0	1592.8	
58 Benzene	78	6.943	6.943	0.000	98	874781	75.0	72.2	
59 1,2-Dichloroethane	62	7.022	7.022	0.000	97	296218	75.0	70.7	
62 n-Heptane	43	7.308	7.308	0.000	96	319252	75.0	70.4	
64 Trichloroethene	130	7.679	7.679	0.000	97	207852	75.0	70.1	
66 Methylcyclohexane	83	7.917	7.917	0.000	96	336831	75.0	72.1	
67 1,2-Dichloropropane	63	7.947	7.947	0.000	94	218947	75.0	68.8	
70 1,4-Dioxane	88	8.026	8.026	0.000	39	31691	1500.0	1445.4	
68 Dibromomethane	93	8.038	8.038	0.000	96	114083	75.0	70.7	
71 Dichlorobromomethane	83	8.233	8.233	0.000	98	226806	75.0	71.0	
74 cis-1,3-Dichloropropene	75	8.677	8.677	0.000	91	264451	75.0	70.7	
75 4-Methyl-2-pentanone (MIBK)	43	8.829	8.829	0.000	99	434749	150.0	148.6	
76 Toluene	91	9.006	9.006	0.000	98	874948	75.0	74.4	
77 trans-1,3-Dichloropropene	75	9.249	9.249	0.000	99	224205	75.0	73.1	
78 Ethyl methacrylate	69	9.310	9.310	0.000	93	225233	75.0	75.9	
79 1,1,2-Trichloroethane	97	9.444	9.444	0.000	94	163298	75.0	73.0	
80 Tetrachloroethene	164	9.517	9.517	0.000	95	165929	75.0	72.7	
81 1,3-Dichloropropane	76	9.602	9.602	0.000	98	303582	75.0	73.1	
82 2-Hexanone	43	9.657	9.657	0.000	99	310969	150.0	147.2	
84 Chlorodibromomethane	129	9.815	9.815	0.000	91	143257	75.0	74.0	
85 Ethylene Dibromide	107	9.930	9.930	0.000	99	155041	75.0	71.9	
86 3-Chlorobenzotrifluoride	180	10.387	10.387	0.000	91	277802	75.0	73.5	
87 Chlorobenzene	112	10.417	10.417	0.000	93	551865	75.0	72.9	
88 4-Chlorobenzotrifluoride	180	10.478	10.478	0.000	95	267607	75.0	74.9	
89 1,1,1,2-Tetrachloroethane	131	10.508	10.508	0.000	92	179137	75.0	72.6	
90 Ethylbenzene	106	10.514	10.514	0.000	99	302122	75.0	75.3	
91 m-Xylene & p-Xylene	106	10.648	10.648	0.000	0	371799	75.0	75.6	
92 o-Xylene	106	11.025	11.025	0.000	97	359461	75.0	76.9	
93 Styrene	104	11.050	11.050	0.000	95	603962	75.0	78.0	
94 Bromoform	173	11.232	11.232	0.000	96	77411	75.0	70.1	
96 2-Chlorobenzotrifluoride	180	11.299	11.299	0.000	96	279773	75.0	75.3	
97 Isopropylbenzene	105	11.396	11.396	0.000	97	886244	75.0	77.4	
100 Bromobenzene	156	11.707	11.707	0.000	95	218069	75.0	72.4	
99 1,1,2,2-Tetrachloroethane	83	11.707	11.707	0.000	76	217578	75.0	72.1	
102 trans-1,4-Dichloro-2-buten	53	11.743	11.743	0.000	72	78865	75.0	72.4	
101 1,2,3-Trichloropropane	110	11.762	11.762	0.000	88	70373	75.0	70.8	
103 N-Propylbenzene	120	11.810	11.810	0.000	99	256762	75.0	74.5	
104 2-Chlorotoluene	126	11.901	11.901	0.000	96	218909	75.0	74.7	
105 3-Chlorotoluene	126	11.968	11.968	0.000	96	225916	75.0	75.0	

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	11.993	11.993	0.000	94	741712	75.0	76.1	
107 4-Chlorotoluene	126	12.023	12.023	0.000	98	235437	75.0	73.0	
108 tert-Butylbenzene	119	12.309	12.309	0.000	94	598804	75.0	75.6	
110 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	98	753282	75.0	77.2	
111 1,2-dichloro-4-(trifluorom	214	12.412	12.412	0.000	98	196559	75.0	72.2	
112 sec-Butylbenzene	105	12.534	12.534	0.000	95	839536	75.0	75.1	
113 1,3-Dichlorobenzene	146	12.650	12.650	0.000	97	386149	75.0	72.0	
114 4-Isopropyltoluene	119	12.692	12.692	0.000	97	724310	75.0	76.6	
115 1,4-Dichlorobenzene	146	12.753	12.753	0.000	93	396239	75.0	71.0	
116 2,4-Dichloro-1-(trifluorom	214	12.777	12.777	0.000	96	183967	75.0	73.0	
118 2,5-Dichlorobenzotrifluori	214	12.820	12.820	0.000	0	196358	75.0	72.1	
120 n-Butylbenzene	91	13.100	13.100	0.000	98	598297	75.0	73.9	
121 1,2-Dichlorobenzene	146	13.112	13.112	0.000	95	354012	75.0	70.6	
122 1,2-Dibromo-3-Chloropropan	75	13.897	13.897	0.000	77	27203	75.0	66.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.049	14.049	0.000	0	616649	225.0	215.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.463	14.463	0.000	0	378630	150.0	138.7	
126 1,2,4-Trichlorobenzene	180	14.724	14.724	0.000	95	127381	75.0	65.3	
127 Hexachlorobutadiene	225	14.870	14.870	0.000	96	62268	75.0	66.3	
128 Naphthalene	128	14.992	14.992	0.000	98	327683	75.0	65.4	
129 1,2,3-Trichlorobenzene	180	15.217	15.217	0.000	94	100749	75.0	63.8	
131 2,4,5-Trichlorotoluene	159	15.990	15.990	0.000	0	32434	75.0	57.0	
130 2,3,6-Trichlorotoluene	159	16.093	16.093	0.000	92	30574	75.0	58.2	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		150.0	139.0	
S 133 Xylenes, Total	106				0		150.0	152.4	
S 135 1,3-Dichloropropene, Total	1				0		150.0	143.7	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOAVAPRI_00006	Amount Added: 3.00	Units: uL	
voaWKet1 Rest_00001	Amount Added: 3.00	Units: uL	
voaWEE1stRest_00001	Amount Added: 3.00	Units: uL	
VOA8260VOAPRI_00139	Amount Added: 3.00	Units: uL	
VOA8260SURR_00040	Amount Added: 3.00	Units: uL	
VOAACROLEINPR_00006	Amount Added: 7.00	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826010.D

Injection Date: 26-Aug-2015 16:16:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD15

Worklist Smp#: 10

Client ID:

Purge Vol: 5.000 mL

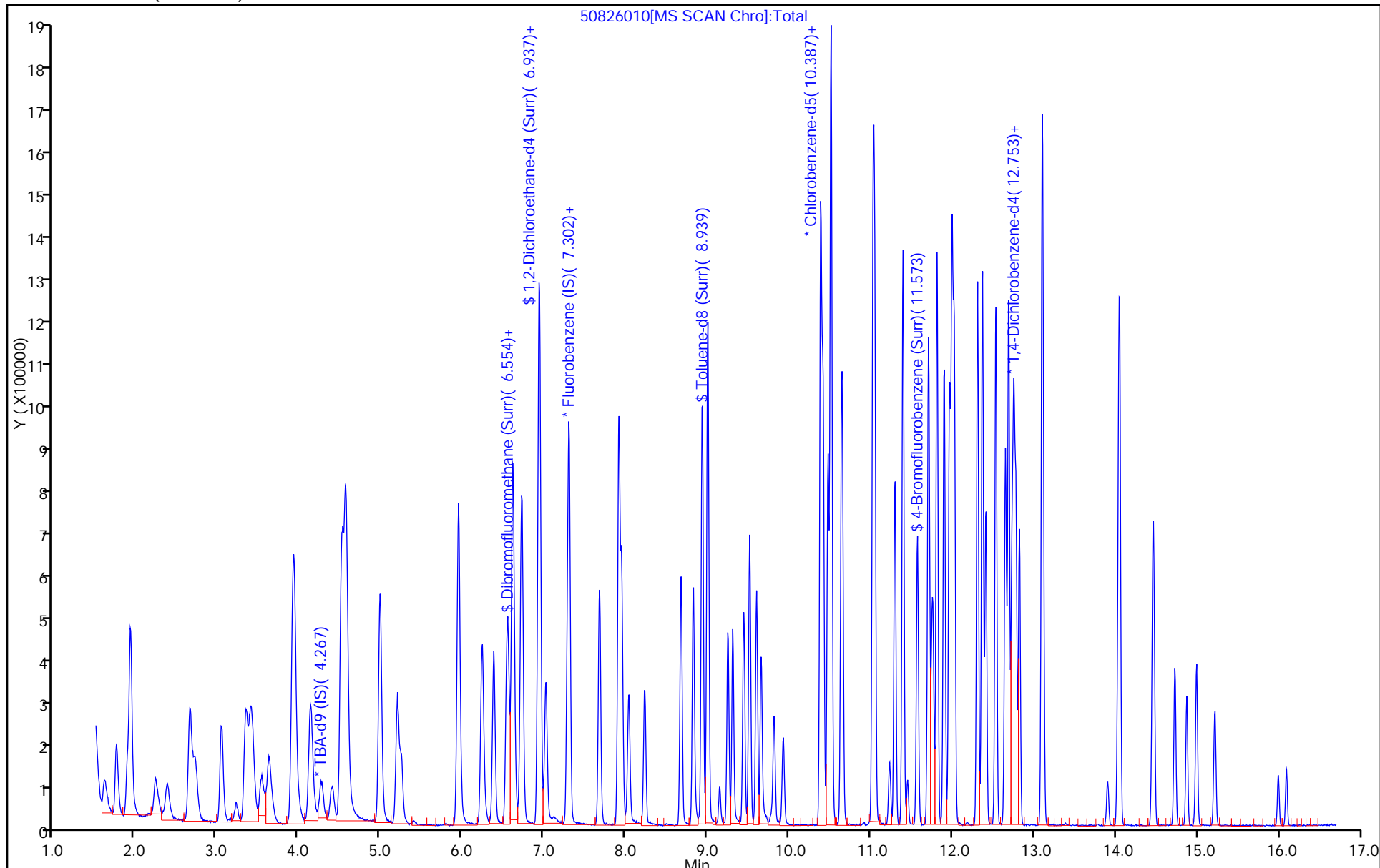
Dil. Factor: 1.0000

ALS Bottle#: 9

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\20150826-8300.b\50826011.D  
 Lims ID: IC VSTD20  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 26-Aug-2015 16:40:30 ALS Bottle#: 10 Worklist Smp#: 11  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD20  
 Misc. Info.: 180-0008300-011  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 11:44:05 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond

Date: 27-Aug-2015 10:30:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.272	4.267	0.005	0	167321	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.290	-0.001	98	500323	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.387	-0.001	85	122904	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.729	-0.001	95	178343	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.566	6.560	0.006	94	230039	100.0	93.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.937	6.931	0.006	0	306020	100.0	90.7	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.939	-0.001	95	918031	100.0	96.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.573	-0.001	86	339508	100.0	94.9	
11 Dichlorodifluoromethane	85	1.614	1.614	0.000	99	268740	100.0	95.1	
12 Chloromethane	50	1.766	1.766	0.000	99	386017	100.0	93.0	
13 Vinyl chloride	62	1.900	1.894	0.006	98	356745	100.0	96.9	
14 Butadiene	39	1.936	1.937	-0.001	97	411077	100.0	94.5	
15 Bromomethane	94	2.240	2.247	-0.007	90	149495	100.0	99.8	
16 Chloroethane	64	2.386	2.387	-0.001	99	207155	100.0	93.3	
17 Dichlorofluoromethane	67	2.666	2.661	0.005	97	435665	100.0	92.4	
18 Trichlorofluoromethane	101	2.715	2.667	0.048	97	334740	100.0	95.0	
20 Ethyl ether	59	3.049	3.050	-0.001	97	295395	100.0	90.4	
21 Acrolein	56	3.226	3.232	-0.006	98	92519	200.0	190.1	
22 1,1-Dichloroethene	96	3.353	3.348	0.005	95	273818	100.0	98.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.414	3.403	0.011	93	284081	100.0	96.2	
24 Acetone	43	3.439	3.445	-0.006	99	173687	200.0	172.0	
25 Iodomethane	142	3.536	3.543	-0.007	98	394076	100.0	94.9	
26 Carbon disulfide	76	3.627	3.628	-0.001	100	636866	100.0	98.4	
28 3-Chloro-1-propene	76	3.925	3.920	0.005	88	156677	100.0	99.3	
30 Methyl acetate	43	3.938	3.938	0.000	99	1419018	500.0	470.4	
31 Methylene Chloride	84	4.138	4.139	-0.001	97	291271	100.0	93.8	
32 2-Methyl-2-propanol	59	4.406	4.407	-0.001	90	185374	1000.0	984.3	
33 Acrylonitrile	53	4.522	4.522	0.000	99	1347643	1000.0	920.7	
34 trans-1,2-Dichloroethene	96	4.564	4.565	-0.001	95	289331	100.0	95.6	
35 Methyl tert-butyl ether	73	4.582	4.577	0.005	96	664089	100.0	94.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.997	-0.007	97	493203	100.0	97.1	
37 1,1-Dichloroethane	63	5.203	5.204	-0.001	96	564450	100.0	94.7	
38 Vinyl acetate	43	5.252	5.252	0.000	97	437799	100.0	97.9	
44 2,2-Dichloropropane	77	5.945	5.952	-0.007	78	234514	100.0	98.2	
45 cis-1,2-Dichloroethene	96	5.951	5.952	-0.001	85	302874	100.0	93.7	
46 2-Butanone (MEK)	43	5.957	5.964	-0.007	62	269779	200.0	177.9	
49 Chlorobromomethane	128	6.237	6.238	-0.001	92	133128	100.0	93.8	
51 Tetrahydrofuran	42	6.249	6.250	-0.001	91	207145	200.0	170.2	
52 Chloroform	83	6.383	6.384	-0.001	96	482795	100.0	93.8	
53 1,1,1-Trichloroethane	97	6.541	6.542	-0.001	97	366328	100.0	96.2	
54 Cyclohexane	56	6.614	6.615	-0.001	96	637776	100.0	100.1	
56 Carbon tetrachloride	117	6.718	6.718	0.000	94	319309	100.0	98.5	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	91	417880	100.0	99.2	
57 Isobutyl alcohol	41	6.924	6.925	-0.001	92	224262	2500.0	2353.8	
58 Benzene	78	6.943	6.943	0.000	98	1175215	100.0	95.3	
59 1,2-Dichloroethane	62	7.022	7.022	0.000	96	399895	100.0	93.7	
62 n-Heptane	43	7.308	7.308	0.000	97	444901	100.0	96.4	
64 Trichloroethene	130	7.679	7.679	0.000	96	285365	100.0	94.6	
66 Methylcyclohexane	83	7.916	7.917	-0.001	96	484430	100.0	101.8	
67 1,2-Dichloropropane	63	7.947	7.947	-0.001	94	304322	100.0	94.0	
70 1,4-Dioxane	88	8.026	8.026	0.000	40	44562	2000.0	1996.7	
68 Dibromomethane	93	8.038	8.038	0.000	97	152946	100.0	93.1	
71 Dichlorobromomethane	83	8.232	8.233	-0.001	97	310676	100.0	95.6	
74 cis-1,3-Dichloropropene	75	8.677	8.677	0.000	90	374197	100.0	98.2	
75 4-Methyl-2-pentanone (MIBK)	43	8.829	8.829	0.000	99	614019	200.0	202.8	
76 Toluene	91	9.005	9.006	-0.001	98	1201786	100.0	98.8	
77 trans-1,3-Dichloropropene	75	9.254	9.249	0.005	99	323125	100.0	101.8	
78 Ethyl methacrylate	69	9.309	9.310	-0.001	94	316812	100.0	103.2	
79 1,1,2-Trichloroethane	97	9.443	9.444	-0.001	94	224541	100.0	97.0	
80 Tetrachloroethene	164	9.516	9.517	-0.001	95	230665	100.0	97.7	
81 1,3-Dichloropropane	76	9.601	9.602	-0.001	98	408560	100.0	95.1	
82 2-Hexanone	43	9.656	9.657	-0.001	99	430988	200.0	197.2	
84 Chlorodibromomethane	129	9.820	9.815	0.005	89	202349	100.0	101.0	
85 Ethylene Dibromide	107	9.930	9.930	0.000	100	212653	100.0	95.3	
86 3-Chlorobenzotrifluoride	180	10.386	10.387	-0.001	91	368187	100.0	94.2	
87 Chlorobenzene	112	10.416	10.417	-0.001	93	752971	100.0	96.1	
88 4-Chlorobenzotrifluoride	180	10.477	10.478	-0.001	96	350243	100.0	94.7	
89 1,1,1,2-Tetrachloroethane	131	10.508	10.508	0.000	91	247335	100.0	96.9	
90 Ethylbenzene	106	10.520	10.514	0.006	99	417206	100.0	100.5	
91 m-Xylene & p-Xylene	106	10.648	10.648	0.000	0	516778	100.0	101.5	
92 o-Xylene	106	11.031	11.025	0.006	97	488783	100.0	101.0	
93 Styrene	104	11.049	11.050	-0.001	95	812783	100.0	101.4	
94 Bromoform	173	11.232	11.232	0.000	96	109983	100.0	96.2	
96 2-Chlorobenzotrifluoride	180	11.299	11.299	-0.001	95	362334	100.0	94.2	
97 Isopropylbenzene	105	11.396	11.396	0.000	97	1229067	100.0	103.7	
100 Bromobenzene	156	11.706	11.707	-0.001	95	300450	100.0	98.1	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.707	-0.001	76	290248	100.0	93.0	
102 trans-1,4-Dichloro-2-buten	53	11.743	11.743	0.000	75	107372	100.0	97.0	
101 1,2,3-Trichloropropane	110	11.767	11.762	0.005	84	94129	100.0	93.2	
103 N-Propylbenzene	120	11.816	11.810	0.006	99	351814	100.0	100.4	
104 2-Chlorotoluene	126	11.901	11.901	0.000	96	301246	100.0	101.1	
105 3-Chlorotoluene	126	11.968	11.968	0.000	95	297767	100.0	97.3	



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	11.992	11.993	-0.001	94	1014826	100.0	102.5	
107 4-Chlorotoluene	126	12.022	12.023	-0.001	98	324433	100.0	99.0	
108 tert-Butylbenzene	119	12.308	12.309	-0.001	94	836893	100.0	104.0	
110 1,2,4-Trimethylbenzene	105	12.369	12.370	-0.001	98	1013032	100.0	102.1	
111 1,2-dichloro-4-(trifluorom	214	12.412	12.412	0.000	98	258438	100.0	93.4	
112 sec-Butylbenzene	105	12.533	12.534	-0.001	95	1168492	100.0	102.8	
113 1,3-Dichlorobenzene	146	12.649	12.650	-0.001	97	523315	100.0	96.0	
114 4-Isopropyltoluene	119	12.692	12.692	0.000	96	987448	100.0	102.7	
115 1,4-Dichlorobenzene	146	12.752	12.753	-0.001	94	532103	100.0	93.9	
116 2,4-Dichloro-1-(trifluorom	214	12.777	12.777	0.000	95	235991	100.0	92.1	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.820	-0.001	0	254571	100.0	91.9	
120 n-Butylbenzene	91	13.099	13.100	-0.001	98	841574	100.0	102.3	
121 1,2-Dichlorobenzene	146	13.111	13.112	-0.001	94	474503	100.0	93.1	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.897	0.005	77	39315	100.0	94.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.049	-0.007	0	827426	300.0	284.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.462	14.463	-0.001	0	510138	200.0	183.9	
126 1,2,4-Trichlorobenzene	180	14.723	14.724	-0.001	94	175776	100.0	88.7	
127 Hexachlorobutadiene	225	14.869	14.870	-0.001	97	83392	100.0	87.3	
128 Naphthalene	128	14.991	14.992	-0.001	98	463258	100.0	90.9	
129 1,2,3-Trichlorobenzene	180	15.210	15.217	-0.007	96	137103	100.0	85.4	
131 2,4,5-Trichlorotoluene	159	15.995	15.990	0.005	0	45065	100.0	77.8	
130 2,3,6-Trichlorotoluene	159	16.092	16.093	-0.001	97	45128	100.0	84.5	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		200.0	189.3	
S 133 Xylenes, Total	106				0		200.0	202.5	
S 135 1,3-Dichloropropene, Total	1				0		200.0	200.0	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOAACROLEINPR_00006	Amount Added: 8.00	Units: uL	
VOAVAPRI_00006	Amount Added: 4.00	Units: uL	
voaWKet1 Rest_00001	Amount Added: 4.00	Units: uL	
voaWEE1stRest_00001	Amount Added: 4.00	Units: uL	
VOA8260VOAPRI_00139	Amount Added: 4.00	Units: uL	
VOA8260SURR_00040	Amount Added: 4.00	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826011.D

Injection Date: 26-Aug-2015 16:40:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD20

Worklist Smp#: 11

Client ID:

Purge Vol: 5.000 mL

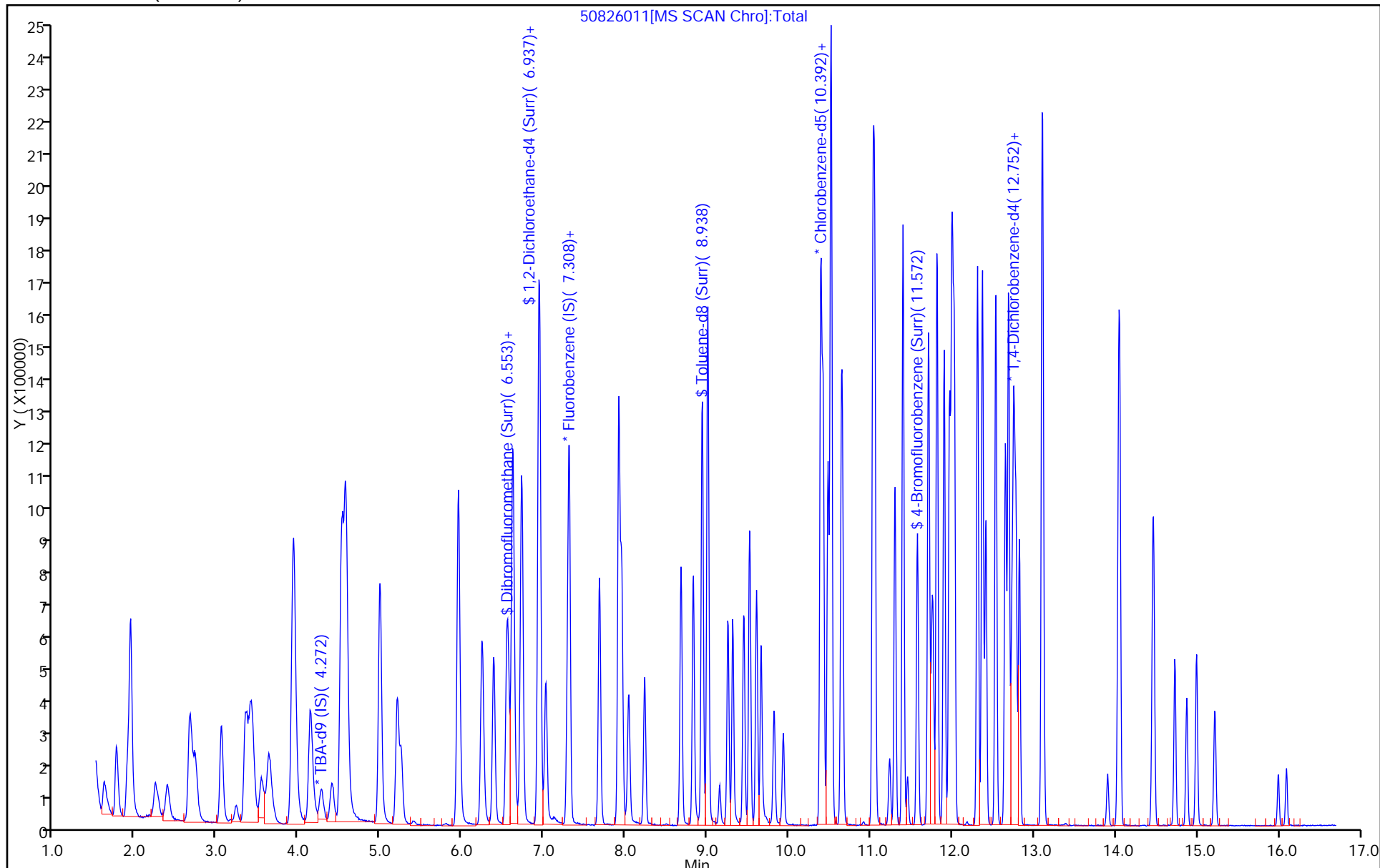
Dil. Factor: 1.0000

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\20150826-8300.b\50826012.D  
 Lims ID: IC VSTD35  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 26-Aug-2015 17:04:30 ALS Bottle#: 11 Worklist Smp#: 12  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD35  
 Misc. Info.: 180-0008300-012  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 11:50:05 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: RT Order ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond

Date: 27-Aug-2015 11:50:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.278	4.267	0.011	0	175358	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.290	-0.001	98	502256	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.387	-0.002	63	129614	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.727	12.729	-0.002	95	181323	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.559	6.560	-0.001	93	399678	175.0	162.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.931	-0.001	0	544829	175.0	160.8	
\$ 7 Toluene-d8 (Surr)	98	8.937	8.939	-0.002	94	1580158	175.0	158.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.573	-0.001	87	617045	175.0	163.6	
11 Dichlorodifluoromethane	85	1.619	1.614	0.005	99	461015	175.0	162.5	
12 Chloromethane	50	1.765	1.766	-0.001	99	669660	175.0	160.7	
13 Vinyl chloride	62	1.905	1.894	0.011	98	603655	175.0	163.3	
14 Butadiene	39	1.935	1.937	-0.002	94	700624	175.0	160.5	
15 Bromomethane	94	2.233	2.247	-0.014	90	267454	175.0	177.8	
16 Chloroethane	64	2.379	2.387	-0.008	99	358728	175.0	160.9	
17 Dichlorofluoromethane	67	2.659	2.661	-0.002	98	748877	175.0	158.3	
18 Trichlorofluoromethane	101	2.708	2.667	0.041	98	579992	175.0	163.9	
20 Ethyl ether	59	3.049	3.050	-0.001	97	521056	175.0	158.9	
21 Acrolein	56	3.231	3.232	-0.001	99	108307	225.0	221.7	
22 1,1-Dichloroethene	96	3.347	3.348	-0.001	95	473565	175.0	169.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.408	3.403	0.005	94	488054	175.0	164.7	
24 Acetone	43	3.438	3.445	-0.007	98	332039	350.0	327.6	
25 Iodomethane	142	3.547	3.543	0.004	98	696716	175.0	167.1	
26 Carbon disulfide	76	3.633	3.628	0.005	100	1177201	175.0	181.2	
28 3-Chloro-1-propene	76	3.919	3.920	-0.001	89	285911	175.0	180.5	
30 Methyl acetate	43	3.937	3.938	-0.001	99	2539904	875.0	838.7	
31 Methylene Chloride	84	4.138	4.139	-0.001	97	510471	175.0	168.4	
32 2-Methyl-2-propanol	59	4.411	4.407	0.004	90	352268	1750.0	1784.8	
33 Acrylonitrile	53	4.521	4.522	-0.001	99	2452551	1750.0	1669.2	
34 trans-1,2-Dichloroethene	96	4.570	4.565	0.005	95	510637	175.0	168.1	
35 Methyl tert-butyl ether	73	4.582	4.577	0.005	97	1204325	175.0	171.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.989	4.997	-0.008	96	889892	175.0	174.5	
37 1,1-Dichloroethane	63	5.202	5.204	-0.002	96	998105	175.0	166.8	
38 Vinyl acetate	43	5.251	5.252	-0.001	97	801339	175.0	178.5	
44 2,2-Dichloropropane	77	5.944	5.952	-0.008	79	413686	175.0	172.5	
45 cis-1,2-Dichloroethene	96	5.950	5.952	-0.002	86	550789	175.0	169.7	
46 2-Butanone (MEK)	43	5.957	5.964	-0.007	98	514894	350.0	338.2	
49 Chlorobromomethane	128	6.236	6.238	-0.002	92	234034	175.0	164.3	
51 Tetrahydrofuran	42	6.249	6.250	-0.001	91	417684	350.0	342.0	
52 Chloroform	83	6.382	6.384	-0.002	96	838419	175.0	162.2	
53 1,1,1-Trichloroethane	97	6.541	6.542	-0.001	97	661680	175.0	173.1	
54 Cyclohexane	56	6.614	6.615	-0.001	96	1115710	175.0	174.4	
56 Carbon tetrachloride	117	6.717	6.718	-0.001	96	566329	175.0	174.0	
55 1,1-Dichloropropene	75	6.729	6.730	-0.001	91	734207	175.0	173.7	
57 Isobutyl alcohol	41	6.924	6.925	-0.001	94	417725	4375.0	4367.4	
58 Benzene	78	6.942	6.943	-0.001	98	2000326	175.0	161.5	
59 1,2-Dichloroethane	62	7.021	7.022	-0.001	97	709743	175.0	165.7	
62 n-Heptane	43	7.307	7.308	-0.001	96	819932	175.0	177.0	
64 Trichloroethene	130	7.678	7.679	-0.001	97	506964	175.0	167.3	
66 Methylcyclohexane	83	7.915	7.917	-0.002	96	866758	175.0	181.5	
67 1,2-Dichloropropane	63	7.946	7.947	-0.001	94	547361	175.0	168.4	
70 1,4-Dioxane	88	8.025	8.026	-0.001	46	82622	3500.0	3687.8	M
68 Dibromomethane	93	8.037	8.038	-0.001	96	277699	175.0	168.4	
71 Dichlorobromomethane	83	8.232	8.233	-0.001	98	576102	175.0	176.5	
74 cis-1,3-Dichloropropene	75	8.676	8.677	-0.001	90	714562	175.0	186.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.828	8.829	-0.001	98	1157588	350.0	362.5	
76 Toluene	91	9.004	9.006	-0.002	97	2050607	175.0	159.8	
77 trans-1,3-Dichloropropene	75	9.248	9.249	-0.001	98	619485	175.0	185.0	
78 Ethyl methacrylate	69	9.309	9.310	-0.001	94	602921	175.0	186.2	
79 1,1,2-Trichloroethane	97	9.442	9.444	-0.002	93	403722	175.0	165.4	
80 Tetrachloroethene	164	9.515	9.517	-0.002	95	401915	175.0	161.4	
81 1,3-Dichloropropane	76	9.601	9.602	-0.001	98	743698	175.0	164.1	
82 2-Hexanone	43	9.655	9.657	-0.002	99	820858	350.0	356.1	
84 Chlorodibromomethane	129	9.813	9.815	-0.002	91	377032	175.0	178.4	
85 Ethylene Dibromide	107	9.929	9.930	-0.001	99	390862	175.0	166.2	
86 3-Chlorobenzotrifluoride	180	10.385	10.387	-0.002	92	686777	175.0	166.5	
87 Chlorobenzene	112	10.416	10.417	-0.001	91	1331912	175.0	161.2	
88 4-Chlorobenzotrifluoride	180	10.477	10.478	-0.001	96	642626	175.0	164.8	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.508	-0.001	93	453483	175.0	168.4	
90 Ethylbenzene	106	10.513	10.514	-0.001	98	756322	175.0	172.7	
91 m-Xylene & p-Xylene	106	10.647	10.648	-0.001	0	934055	175.0	173.9	
92 o-Xylene	106	11.030	11.025	0.005	95	890574	175.0	174.5	
93 Styrene	104	11.048	11.050	-0.002	95	1460286	175.0	172.7	
94 Bromoform	173	11.231	11.232	-0.001	96	217546	175.0	180.4	
96 2-Chlorobenzotrifluoride	180	11.298	11.299	-0.001	95	670799	175.0	165.3	
97 Isopropylbenzene	105	11.395	11.396	-0.001	97	2113845	175.0	169.1	
100 Bromobenzene	156	11.712	11.707	0.005	95	543146	175.0	174.5	
99 1,1,2,2-Tetrachloroethane	83	11.705	11.707	-0.002	77	530728	175.0	161.2	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.743	-0.001	78	209384	175.0	186.1	
101 1,2,3-Trichloropropane	110	11.760	11.762	-0.002	87	177490	175.0	172.9	
103 N-Propylbenzene	120	11.815	11.810	0.005	97	636587	175.0	178.7	
104 2-Chlorotoluene	126	11.900	11.901	-0.001	95	529736	175.0	174.9	
105 3-Chlorotoluene	126	11.967	11.968	-0.001	95	552058	175.0	177.4	

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	11.997	11.993	0.004	95	1760059	175.0	174.8	
107 4-Chlorotoluene	126	12.022	12.023	-0.001	98	582109	175.0	174.7	
108 tert-Butylbenzene	119	12.308	12.309	-0.001	94	1486960	175.0	181.7	
110 1,2,4-Trimethylbenzene	105	12.369	12.370	-0.001	98	1772230	175.0	175.7	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.412	-0.001	98	484133	175.0	172.2	
112 sec-Butylbenzene	105	12.533	12.534	-0.001	96	2029430	175.0	175.6	
113 1,3-Dichlorobenzene	146	12.648	12.650	-0.002	97	937539	175.0	169.2	
114 4-Isopropyltoluene	119	12.691	12.692	-0.001	96	1738859	175.0	177.9	
115 1,4-Dichlorobenzene	146	12.752	12.753	-0.001	93	949324	175.0	164.7	
116 2,4-Dichloro-1-(trifluorom	214	12.782	12.777	0.005	95	453275	175.0	174.0	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.820	-0.001	0	486163	175.0	172.6	
120 n-Butylbenzene	91	13.099	13.100	-0.001	97	1504673	175.0	179.9	
121 1,2-Dichlorobenzene	146	13.111	13.112	-0.001	96	849612	175.0	164.0	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.897	0.005	79	75555	175.0	177.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.048	14.049	-0.001	0	1576122	525.0	532.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.461	14.463	-0.002	0	994231	350.0	352.5	
126 1,2,4-Trichlorobenzene	180	14.723	14.724	-0.001	94	339446	175.0	168.4	
127 Hexachlorobutadiene	225	14.869	14.870	-0.001	97	160392	175.0	165.2	
128 Naphthalene	128	14.990	14.992	-0.002	98	934428	175.0	180.4	
129 1,2,3-Trichlorobenzene	180	15.216	15.217	-0.001	94	261711	175.0	160.4	
131 2,4,5-Trichlorotoluene	159	15.988	15.990	-0.002	0	100325	175.0	170.5	
130 2,3,6-Trichlorotoluene	159	16.092	16.093	-0.001	94	99793	175.0	185.2	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		350.0	348.4	
S 134 1,2-Dichloroethene, Total	96				0		350.0	337.9	
S 135 1,3-Dichloropropene, Total	1				0		350.0	371.9	

### QC Flag Legend

#### Processing Flags

ND - Not Detected or Marked ND

#### Review Flags

M - Manually Integrated

### Reagents:

VOA8260SURR_00040	Amount Added: 7.00	Units: uL	
VOA8260VOAPRI_00139	Amount Added: 7.00	Units: uL	
voaWEE1stRest_00001	Amount Added: 7.00	Units: uL	
voaWKet1 Rest_00001	Amount Added: 7.00	Units: uL	
VOAVAPRI_00006	Amount Added: 7.00	Units: uL	
VOAACROLEINPR_00006	Amount Added: 9.00	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826012.D

Injection Date: 26-Aug-2015 17:04:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD35

Worklist Smp#: 12

Client ID:

Purge Vol: 5.000 mL

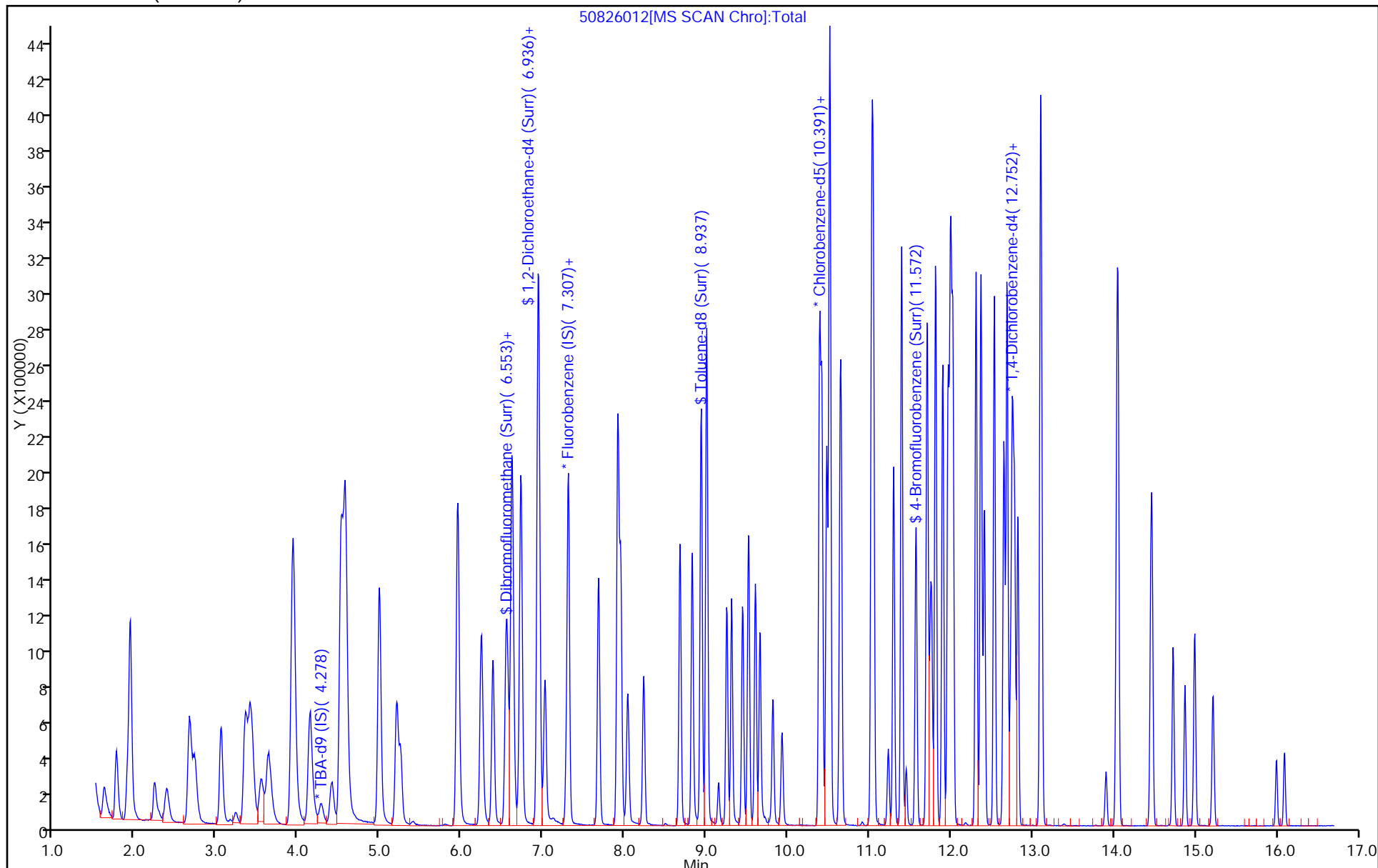
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



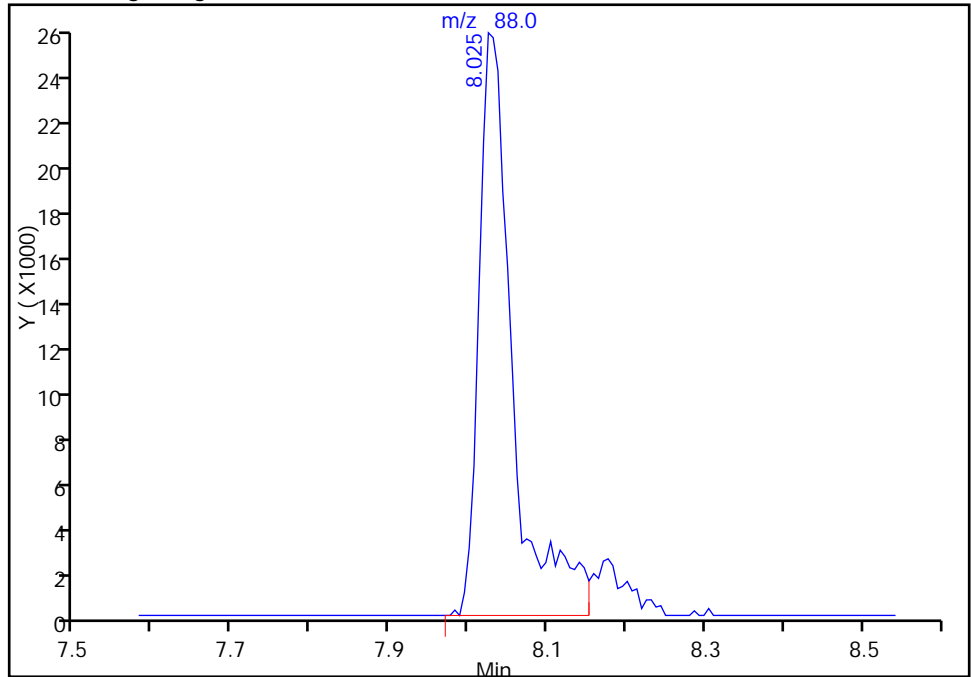
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826012.D  
Injection Date: 26-Aug-2015 17:04:30 Instrument ID: CHHP5  
Lims ID: IC VSTD35  
Client ID:  
Operator ID: 001562 ALS Bottle#: 11 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

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

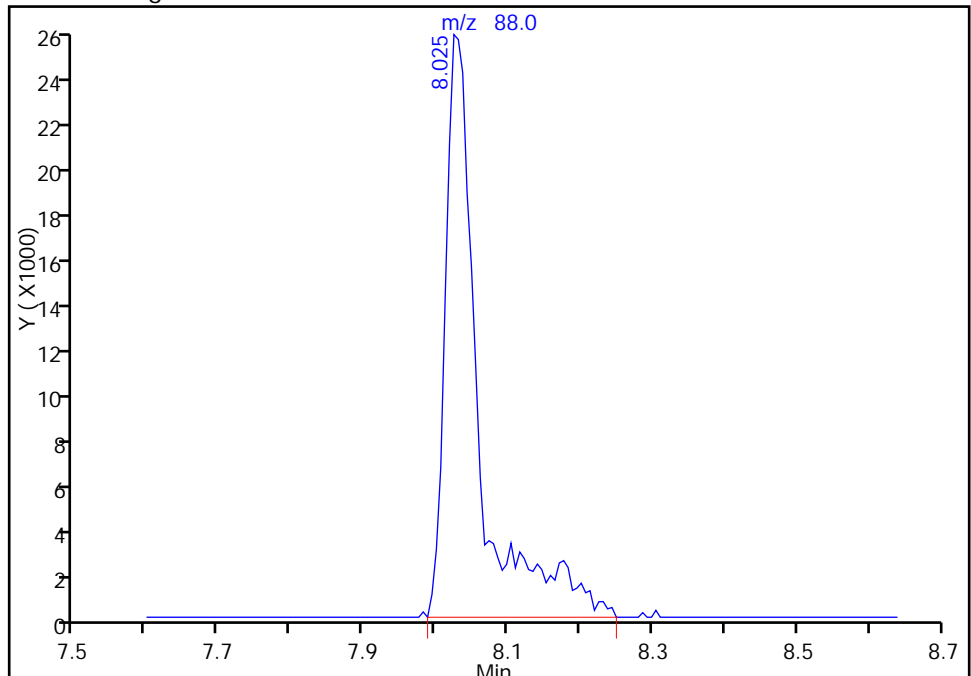
RT: 8.02  
Area: 75762  
Amount: 3419.0350  
Amount Units: ng

Processing Integration Results



RT: 8.02  
Area: 82622  
Amount: 3687.8427  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 27-Aug-2015 10:34:42  
Audit Action: Manually Integrated  
Audit Reason: Incomplete Integration

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826013.D  
 Lims ID: IC VSTD40  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 26-Aug-2015 17:28:30 ALS Bottle#: 12 Worklist Smp#: 13  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD40  
 Misc. Info.: 180-0008300-013  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 11:50:23 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond

Date: 27-Aug-2015 10:38:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.274	4.267	0.007	0	190633	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.285	7.290	-0.005	98	491948	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.387	0.001	59	135336	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.729	0.001	94	186041	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.562	6.560	0.002	94	438908	200.0	181.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.933	6.931	0.002	0	597233	200.0	180.0	
\$ 7 Toluene-d8 (Surr)	98	8.934	8.939	-0.005	94	1727014	200.0	165.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.568	11.573	-0.005	86	697446	200.0	177.1	
11 Dichlorodifluoromethane	85	1.616	1.614	0.002	98	506611	200.0	182.3	
12 Chloromethane	50	1.762	1.766	-0.004	99	733518	200.0	179.7	
13 Vinyl chloride	62	1.902	1.894	0.008	98	663498	200.0	183.3	
14 Butadiene	39	1.938	1.937	0.001	95	762590	200.0	178.4	
15 Bromomethane	94	2.230	2.247	-0.017	91	244127	200.0	165.7	
16 Chloroethane	64	2.382	2.387	-0.005	99	395735	200.0	181.2	
17 Dichlorofluoromethane	67	2.662	2.661	0.001	98	843233	200.0	182.0	
18 Trichlorofluoromethane	101	2.711	2.667	0.044	98	636269	200.0	183.6	
20 Ethyl ether	59	3.045	3.050	-0.005	97	582513	200.0	181.3	
21 Acrolein	56	3.228	3.232	-0.004	99	117496	250.0	245.5	
22 1,1-Dichloroethene	96	3.343	3.348	-0.005	94	516257	200.0	188.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.410	3.403	0.007	93	532678	200.0	183.5	
24 Acetone	43	3.435	3.445	-0.010	99	349354	400.0	351.9	
25 Iodomethane	142	3.538	3.543	-0.005	98	765249	200.0	187.4	
26 Carbon disulfide	76	3.629	3.628	0.001	100	1297173	200.0	203.9	
28 3-Chloro-1-propene	76	3.921	3.920	0.001	89	325399	200.0	209.7	
30 Methyl acetate	43	3.940	3.938	0.002	99	2811173	1000.0	947.8	
31 Methylene Chloride	84	4.134	4.139	-0.005	97	573290	200.0	194.0	
32 2-Methyl-2-propanol	59	4.408	4.407	0.001	90	410928	2000.0	1915.2	
33 Acrylonitrile	53	4.517	4.522	-0.005	98	2730347	2000.0	1897.2	
34 trans-1,2-Dichloroethene	96	4.560	4.565	-0.005	95	552053	200.0	185.6	
35 Methyl tert-butyl ether	73	4.578	4.577	0.001	97	1367672	200.0	198.6	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.986	4.997	-0.011	97	948868	200.0	190.0	
37 1,1-Dichloroethane	63	5.199	5.204	-0.005	97	1104940	200.0	188.5	
38 Vinyl acetate	43	5.247	5.252	-0.005	97	887283	200.0	201.8	
45 cis-1,2-Dichloroethene	96	5.947	5.952	-0.005	84	600559	200.0	188.9	
44 2,2-Dichloropropane	77	5.947	5.952	-0.005	84	451339	200.0	192.2	
46 2-Butanone (MEK)	43	5.953	5.964	-0.011	90	569128	400.0	381.6	
49 Chlorobromomethane	128	6.239	6.238	0.001	92	262832	200.0	188.3	
51 Tetrahydrofuran	42	6.245	6.250	-0.005	95	461621	400.0	385.8	
52 Chloroform	83	6.379	6.384	-0.005	95	922240	200.0	182.1	
53 1,1,1-Trichloroethane	97	6.543	6.542	0.001	96	710348	200.0	189.7	
54 Cyclohexane	56	6.610	6.615	-0.005	96	1210903	200.0	193.3	
56 Carbon tetrachloride	117	6.714	6.718	-0.004	95	616016	200.0	193.2	
55 1,1-Dichloropropene	75	6.726	6.730	-0.004	93	785333	200.0	189.7	
57 Isobutyl alcohol	41	6.927	6.925	0.002	94	492768	5000.0	5259.9	
58 Benzene	78	6.939	6.943	-0.004	98	2197241	200.0	181.1	
59 1,2-Dichloroethane	62	7.018	7.022	-0.004	96	788760	200.0	188.0	
62 n-Heptane	43	7.310	7.308	0.002	96	859948	200.0	189.6	
64 Trichloroethene	130	7.675	7.679	-0.004	96	556980	200.0	187.7	
66 Methylcyclohexane	83	7.912	7.917	-0.005	96	937977	200.0	200.6	
67 1,2-Dichloropropane	63	7.949	7.947	0.002	94	594824	200.0	186.9	
70 1,4-Dioxane	88	8.034	8.026	0.008	41	91547	4000.0	4171.8	
68 Dibromomethane	93	8.034	8.038	-0.004	97	307857	200.0	190.6	
71 Dichlorobromomethane	83	8.228	8.233	-0.005	98	644471	200.0	201.6	
74 cis-1,3-Dichloropropene	75	8.672	8.677	-0.005	91	812298	200.0	216.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.825	8.829	-0.004	98	1320471	400.0	396.0	
76 Toluene	91	9.001	9.006	-0.005	97	2228576	200.0	166.3	
77 trans-1,3-Dichloropropene	75	9.250	9.249	0.001	98	704918	200.0	201.6	
78 Ethyl methacrylate	69	9.311	9.310	0.001	94	687101	200.0	203.2	
79 1,1,2-Trichloroethane	97	9.445	9.444	0.001	94	441190	200.0	173.1	
80 Tetrachloroethene	164	9.518	9.517	0.001	95	438898	200.0	168.8	
81 1,3-Dichloropropane	76	9.603	9.602	0.001	98	840507	200.0	177.6	
82 2-Hexanone	43	9.658	9.657	0.001	98	943138	400.0	391.8	
84 Chlorodibromomethane	129	9.816	9.815	0.001	91	427847	200.0	193.9	
85 Ethylene Dibromide	107	9.926	9.930	-0.004	98	449617	200.0	183.1	
86 3-Chlorobenzotrifluoride	180	10.388	10.387	0.001	93	749898	200.0	174.2	
87 Chlorobenzene	112	10.412	10.417	-0.005	92	1491257	200.0	172.9	
88 4-Chlorobenzotrifluoride	180	10.473	10.478	-0.005	96	709487	200.0	174.3	
89 1,1,1,2-Tetrachloroethane	131	10.510	10.508	0.002	94	513686	200.0	182.7	
90 Ethylbenzene	106	10.516	10.514	0.002	98	837593	200.0	183.2	
91 m-Xylene & p-Xylene	106	10.650	10.648	0.002	0	1021032	200.0	182.1	
92 o-Xylene	106	11.027	11.025	0.002	97	984811	200.0	184.8	
93 Styrene	104	11.051	11.050	0.001	94	1627751	200.0	184.4	
94 Bromoform	173	11.234	11.232	0.002	96	254607	200.0	202.2	
96 2-Chlorobenzotrifluoride	180	11.294	11.299	-0.005	95	748529	200.0	176.7	
97 Isopropylbenzene	105	11.392	11.396	-0.004	97	2317406	200.0	177.6	
100 Bromobenzene	156	11.708	11.707	0.001	95	609774	200.0	190.9	
99 1,1,2,2-Tetrachloroethane	83	11.708	11.707	0.001	78	605346	200.0	176.1	
102 trans-1,4-Dichloro-2-buten	53	11.745	11.743	0.002	43	238659	200.0	206.7	
101 1,2,3-Trichloropropane	110	11.763	11.762	0.001	86	200908	200.0	190.7	
103 N-Propylbenzene	120	11.812	11.810	0.002	97	717909	200.0	196.4	
104 2-Chlorotoluene	126	11.897	11.901	-0.004	96	608876	200.0	195.9	
105 3-Chlorotoluene	126	11.964	11.968	-0.004	95	621607	200.0	194.6	

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	11.994	11.993	0.001	95	1952122	200.0	189.0	
107 4-Chlorotoluene	126	12.024	12.023	0.001	98	649501	200.0	189.9	
108 tert-Butylbenzene	119	12.310	12.309	0.001	94	1642231	200.0	195.6	
110 1,2,4-Trimethylbenzene	105	12.365	12.370	-0.005	98	1973541	200.0	190.7	
111 1,2-dichloro-4-(trifluorom	214	12.408	12.412	-0.004	97	529814	200.0	183.6	
112 sec-Butylbenzene	105	12.529	12.534	-0.005	96	2244027	200.0	189.3	
113 1,3-Dichlorobenzene	146	12.651	12.650	0.001	96	1071203	200.0	188.4	
114 4-Isopropyltoluene	119	12.688	12.692	-0.004	97	1944911	200.0	193.9	
115 1,4-Dichlorobenzene	146	12.754	12.753	0.001	94	1084086	200.0	183.3	
116 2,4-Dichloro-1-(trifluorom	214	12.779	12.777	0.002	95	483618	200.0	180.9	
118 2,5-Dichlorobenzotrifluori	214	12.821	12.820	0.001	0	571654	200.0	197.9	
120 n-Butylbenzene	91	13.095	13.100	-0.005	98	1691227	200.0	197.0	
121 1,2-Dichlorobenzene	146	13.107	13.112	-0.005	94	988861	200.0	186.1	
122 1,2-Dibromo-3-Chloropropan	75	13.904	13.897	0.007	78	91242	200.0	209.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.044	14.049	-0.005	0	1875036	600.0	617.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.458	14.463	-0.005	0	1204899	400.0	416.3	
126 1,2,4-Trichlorobenzene	180	14.726	14.724	0.002	94	424061	200.0	205.1	
127 Hexachlorobutadiene	225	14.872	14.870	0.002	97	188644	200.0	189.4	
128 Naphthalene	128	14.987	14.992	-0.005	98	1180622	200.0	222.2	
129 1,2,3-Trichlorobenzene	180	15.212	15.217	-0.005	95	333363	200.0	199.2	
131 2,4,5-Trichlorotoluene	159	15.991	15.990	0.001	0	135933	200.0	225.1	
130 2,3,6-Trichlorotoluene	159	16.088	16.093	-0.005	95	131306	200.0	242.0	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-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	366.9	
S 135 1,3-Dichloropropene, Total	1				0		400.0	418.5	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOAACROLEINPR_00006	Amount Added: 10.00	Units: uL	
VOAVAPRI_00006	Amount Added: 8.00	Units: uL	
voaWKet1 Rest_00001	Amount Added: 8.00	Units: uL	
voaWEE1stRest_00001	Amount Added: 8.00	Units: uL	
VOA8260VOAPRI_00139	Amount Added: 8.00	Units: uL	
VOA8260SURR_00040	Amount Added: 8.00	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826013.D

Injection Date: 26-Aug-2015 17:28:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD40

Worklist Smp#: 13

Client ID:

Purge Vol: 5.000 mL

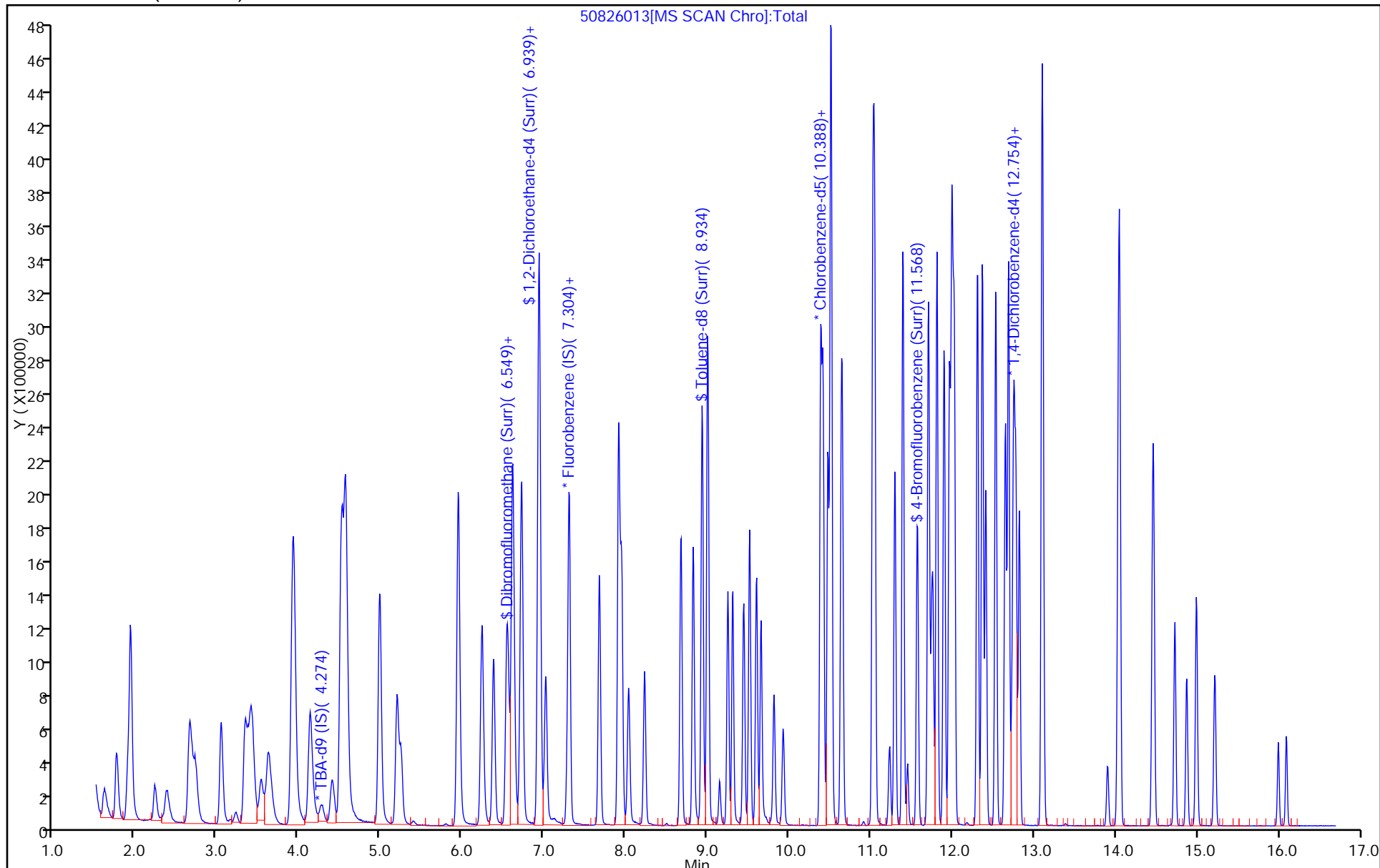
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Lims ID: IC VSTD50  
 Client ID:  
 Sample Type: IC Calib Level: 8  
 Inject. Date: 26-Aug-2015 17:52:30 ALS Bottle#: 13 Worklist Smp#: 14  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD50  
 Misc. Info.: 180-0008300-014  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 11:50:43 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

First Level Reviewer: fergusond

Date: 27-Aug-2015 10:43:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.271	4.267	0.004	0	178553	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.290	-0.001	98	422908	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.387	-0.002	56	117789	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.729	-0.001	92	156354	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.559	6.560	-0.001	93	562879	250.0	271.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.931	0.005	0	751925	250.0	263.6	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.939	-0.001	94	2103482	250.0	231.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.573	-0.001	86	854277	250.0	249.2	
11 Dichlorodifluoromethane	85	1.619	1.614	0.005	99	585297	250.0	245.0	
12 Chloromethane	50	1.765	1.766	-0.001	99	886889	250.0	252.8	
13 Vinyl chloride	62	1.905	1.894	0.011	99	782206	250.0	251.3	
14 Butadiene	39	1.935	1.937	-0.002	96	893578	250.0	243.1	
15 Bromomethane	94	2.234	2.247	-0.013	90	333317	250.0	263.2	
16 Chloroethane	64	2.380	2.387	-0.007	99	465079	250.0	247.7	
17 Dichlorofluoromethane	67	2.665	2.661	0.004	98	986298	250.0	247.6	
18 Trichlorofluoromethane	101	2.702	2.667	0.035	96	739174	250.0	248.1	M
20 Ethyl ether	59	3.043	3.050	-0.007	97	750491	250.0	271.8	
21 Acrolein	56	3.225	3.232	-0.007	99	127965	275.0	311.1	
22 1,1-Dichloroethene	96	3.341	3.348	-0.007	95	627614	250.0	266.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.408	3.403	0.005	93	629046	250.0	252.1	
24 Acetone	43	3.438	3.445	-0.007	99	457819	500.0	536.5	
25 Iodomethane	142	3.535	3.543	-0.008	99	963985	250.0	274.6	
26 Carbon disulfide	76	3.627	3.628	-0.001	100	1607306	250.0	293.9	
28 3-Chloro-1-propene	76	3.913	3.920	-0.007	89	399041	250.0	299.1	
30 Methyl acetate	43	3.937	3.938	-0.001	98	3450277	1250.0	1353.2	
31 Methylene Chloride	84	4.132	4.139	-0.007	98	715184	250.0	284.3	
32 2-Methyl-2-propanol	59	4.405	4.407	-0.002	91	514360	2500.0	2559.4	
33 Acrylonitrile	53	4.521	4.522	-0.001	97	3337347	2500.0	2697.5	
34 trans-1,2-Dichloroethene	96	4.563	4.565	-0.002	95	687878	250.0	269.0	
35 Methyl tert-butyl ether	73	4.576	4.577	-0.001	98	1750025	250.0	295.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.989	4.997	-0.008	97	1125958	250.0	262.3	
37 1,1-Dichloroethane	63	5.202	5.204	-0.002	96	1377944	250.0	273.5	
38 Vinyl acetate	43	5.245	5.252	-0.007	97	1072494	250.0	283.7	
45 cis-1,2-Dichloroethene	96	5.951	5.952	-0.001	85	760457	250.0	278.3	
44 2,2-Dichloropropane	77	5.944	5.952	-0.008	84	564524	250.0	279.6	
46 2-Butanone (MEK)	43	5.957	5.964	-0.007	99	698551	500.0	544.9	
49 Chlorobromomethane	128	6.236	6.238	-0.002	92	336595	250.0	280.6	
51 Tetrahydrofuran	42	6.249	6.250	-0.001	93	561739	500.0	546.2	
52 Chloroform	83	6.382	6.384	-0.002	96	1166838	250.0	268.1	
53 1,1,1-Trichloroethane	97	6.541	6.542	-0.001	97	898258	250.0	279.1	
54 Cyclohexane	56	6.614	6.615	-0.001	96	1451032	250.0	269.4	
56 Carbon tetrachloride	117	6.711	6.718	-0.007	95	764597	250.0	279.0	
55 1,1-Dichloropropene	75	6.729	6.730	-0.001	91	975802	250.0	274.2	
57 Isobutyl alcohol	41	6.924	6.925	-0.001	94	588608	6250.0	7308.6	
58 Benzene	78	6.942	6.943	-0.001	99	2707324	250.0	259.6	
59 1,2-Dichloroethane	62	7.021	7.022	-0.001	96	987010	250.0	273.7	
62 n-Heptane	43	7.307	7.308	-0.001	96	1040377	250.0	266.8	
64 Trichloroethene	130	7.678	7.679	-0.001	97	693909	250.0	272.0	
66 Methylcyclohexane	83	7.915	7.917	-0.002	95	1114866	250.0	277.3	
67 1,2-Dichloropropane	63	7.946	7.947	-0.001	94	765352	250.0	279.7	
70 1,4-Dioxane	88	8.031	8.026	0.005	42	111802	5000.0	5926.6	
68 Dibromomethane	93	8.037	8.038	-0.001	97	386058	250.0	278.0	
71 Dichlorobromomethane	83	8.232	8.233	-0.001	98	812136	250.0	295.5	
74 cis-1,3-Dichloropropene	75	8.676	8.677	-0.001	91	1033255	250.0	320.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.828	8.829	-0.001	98	1599371	500.0	551.1	
76 Toluene	91	9.004	9.006	-0.002	96	2681762	250.0	230.0	
77 trans-1,3-Dichloropropene	75	9.248	9.249	-0.001	99	891401	250.0	292.9	
78 Ethyl methacrylate	69	9.309	9.310	-0.001	94	862044	250.0	292.9	
79 1,1,2-Trichloroethane	97	9.442	9.444	-0.002	94	557982	250.0	251.6	
80 Tetrachloroethene	164	9.515	9.517	-0.002	94	530215	250.0	234.2	
81 1,3-Dichloropropane	76	9.601	9.602	-0.001	98	1030200	250.0	250.2	
82 2-Hexanone	43	9.655	9.657	-0.002	98	1123041	500.0	536.1	
84 Chlorodibromomethane	129	9.814	9.815	-0.001	91	542940	250.0	282.7	
85 Ethylene Dibromide	107	9.929	9.930	-0.001	98	553588	250.0	259.0	
86 3-Chlorobenzotrifluoride	180	10.391	10.387	0.004	92	813323	250.0	217.0	
87 Chlorobenzene	112	10.416	10.417	-0.001	91	1793475	250.0	238.9	
88 4-Chlorobenzotrifluoride	180	10.477	10.478	-0.001	96	781989	250.0	220.7	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.508	-0.001	93	642159	250.0	262.4	
90 Ethylbenzene	106	10.519	10.514	0.005	97	1001210	250.0	251.5	
91 m-Xylene & p-Xylene	106	10.647	10.648	-0.001	0	1238884	250.0	253.8	
92 o-Xylene	106	11.030	11.025	0.005	97	1203666	250.0	259.5	
93 Styrene	104	11.048	11.050	-0.002	94	1948876	250.0	253.6	
94 Bromoform	173	11.231	11.232	-0.001	95	317730	250.0	289.9	
96 2-Chlorobenzotrifluoride	180	11.298	11.299	-0.001	94	809757	250.0	219.6	
97 Isopropylbenzene	105	11.395	11.396	-0.001	98	2727755	250.0	240.1	
100 Bromobenzene	156	11.705	11.707	-0.002	95	743219	250.0	276.9	
99 1,1,2,2-Tetrachloroethane	83	11.705	11.707	-0.002	77	725938	250.0	242.6	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.743	-0.001	77	290130	250.0	299.0	
101 1,2,3-Trichloropropane	110	11.766	11.762	0.004	87	246872	250.0	278.9	
103 N-Propylbenzene	120	11.809	11.810	-0.001	97	850210	250.0	276.7	
104 2-Chlorotoluene	126	11.900	11.901	-0.001	95	726063	250.0	278.0	
105 3-Chlorotoluene	126	11.967	11.968	-0.001	95	702342	250.0	261.7	

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	11.997	11.993	0.004	95	2264532	250.0	260.9	
107 4-Chlorotoluene	126	12.022	12.023	-0.001	98	778860	250.0	271.0	
108 tert-Butylbenzene	119	12.308	12.309	-0.001	94	1938716	250.0	274.7	
110 1,2,4-Trimethylbenzene	105	12.369	12.370	-0.001	98	2303042	250.0	264.8	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.412	-0.001	97	580120	250.0	239.2	
112 sec-Butylbenzene	105	12.533	12.534	-0.001	96	2563359	250.0	257.3	
113 1,3-Dichlorobenzene	146	12.648	12.650	-0.002	96	1263925	250.0	264.5	
114 4-Isopropyltoluene	119	12.691	12.692	-0.001	95	2238219	250.0	265.5	
115 1,4-Dichlorobenzene	146	12.758	12.753	0.005	91	1287906	250.0	259.1	
116 2,4-Dichloro-1-(trifluorom	214	12.782	12.777	0.005	96	531698	250.0	236.7	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.820	-0.001	0	585601	250.0	241.2	
120 n-Butylbenzene	91	13.099	13.100	-0.001	96	1909580	250.0	264.7	
121 1,2-Dichlorobenzene	146	13.111	13.112	-0.001	94	1135542	250.0	254.3	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.897	0.005	92	105625	250.0	288.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.048	14.049	-0.001	0	1891413	750.0	741.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.461	14.463	-0.002	0	1220209	500.0	501.7	
126 1,2,4-Trichlorobenzene	180	14.723	14.724	-0.001	94	445017	250.0	256.1	
127 Hexachlorobutadiene	225	14.869	14.870	-0.001	98	196056	250.0	234.2	
128 Naphthalene	128	14.991	14.992	-0.001	98	1235965	250.0	276.7	
129 1,2,3-Trichlorobenzene	180	15.216	15.217	-0.001	94	351787	250.0	250.1	
131 2,4,5-Trichlorotoluene	159	15.994	15.990	0.004	0	136778	250.0	269.5	
130 2,3,6-Trichlorotoluene	159	16.092	16.093	-0.001	96	133555	250.0	291.3	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		500.0	513.3	
S 134 1,2-Dichloroethene, Total	96				0		500.0	547.3	
S 135 1,3-Dichloropropene, Total	1				0		500.0	613.8	

### QC Flag Legend

#### Processing Flags

ND - Not Detected or Marked ND

#### Review Flags

M - Manually Integrated

### Reagents:

VOA8260SURR_00040	Amount Added: 10.00	Units: uL	
VOA8260VOAPRI_00139	Amount Added: 10.00	Units: uL	
voaWEE1stRest_00001	Amount Added: 10.00	Units: uL	
voaWKet1 Rest_00001	Amount Added: 10.00	Units: uL	
VOAVAPRI_00006	Amount Added: 10.00	Units: uL	
VOAACROLEINPR_00006	Amount Added: 11.00	Units: uL	
VOA8260INT_00040	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D

Injection Date: 26-Aug-2015 17:52:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD50

Worklist Smp#: 14

Client ID:

Purge Vol: 5.000 mL

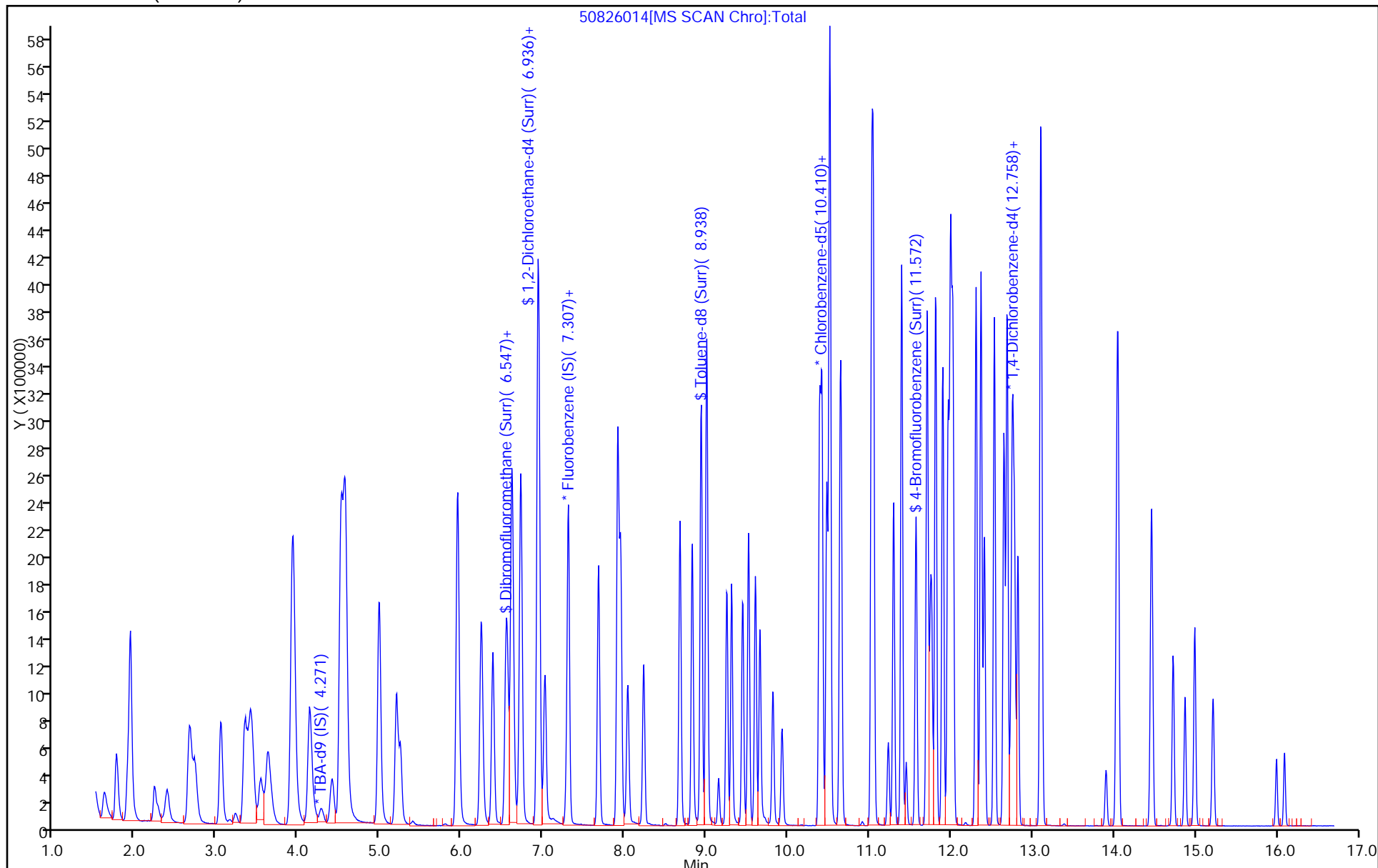
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



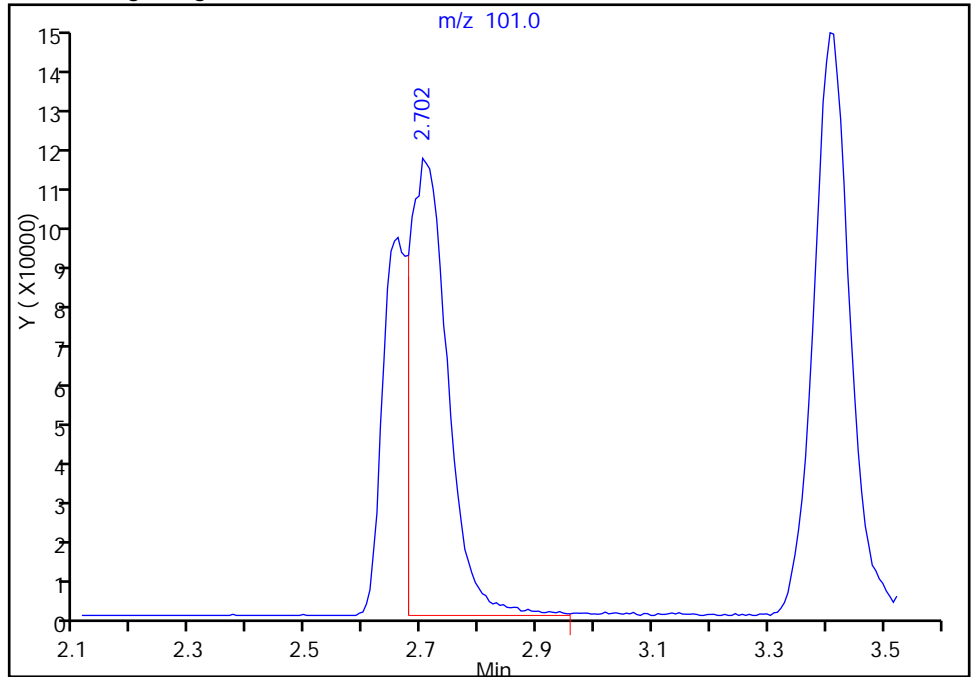
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
Injection Date: 26-Aug-2015 17:52:30 Instrument ID: CHHP5  
Lims ID: IC VSTD50  
Client ID:  
Operator ID: 001562 ALS Bottle#: 13 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

18 Trichlorofluoromethane, CAS: 75-69-4

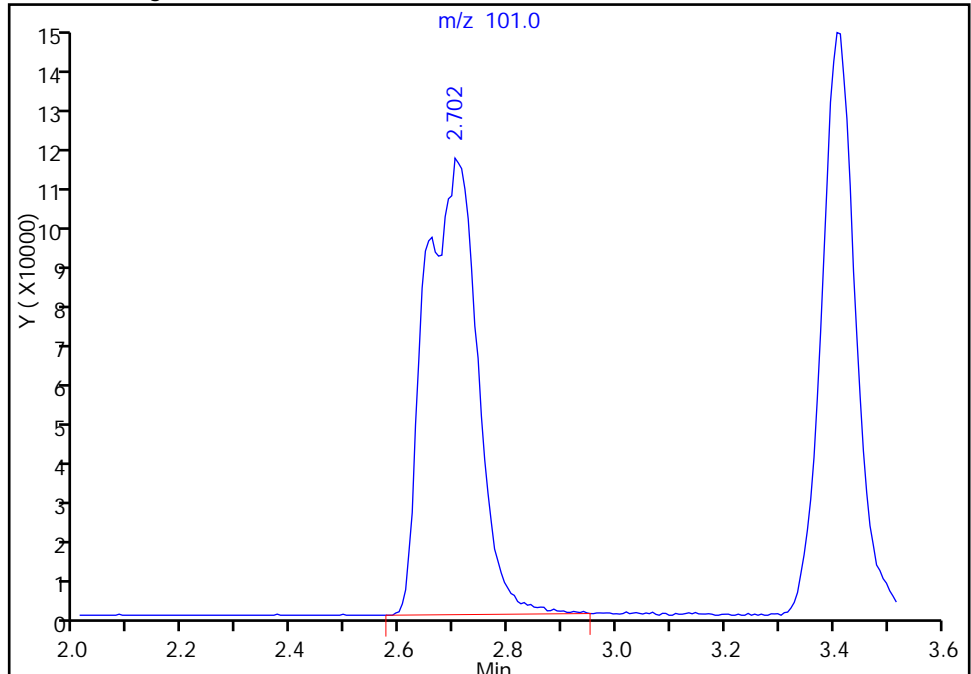
RT: 2.70  
Area: 496107  
Amount: 173.5779  
Amount Units: ng

Processing Integration Results



RT: 2.70  
Area: 739174  
Amount: 248.0735  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 27-Aug-2015 10:43:05  
Audit Action: Manually Integrated  
Audit Reason: Incomplete Integration



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-155398/2 Calibration Date: 09/30/2015 11:16  
 Instrument ID: CHHP5 Calib Start Date: 08/26/2015 15:04  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/26/2015 17:52  
 Lab File ID: 50930002.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	0.2825	0.3259	0.1000	11.5	10.0	15.4	20.0
Chloromethane	Ave	0.4148	0.4576	0.1000	11.0	10.0	10.3	20.0
Vinyl chloride	Ave	0.3679	0.3782	0.1000	10.3	10.0	2.8	20.0
1,3-Butadiene	Ave	0.4345	0.5148	0.0100	11.8	10.0	18.5	20.0
Bromomethane	Ave	0.1497	0.1654	0.0500	11.0	10.0	10.5	20.0
Chloroethane	Ave	0.2220	0.2144	0.0500	9.66	10.0	-3.4	20.0
Dichlorofluoromethane	Ave	0.4709	0.4767	0.0100	10.1	10.0	1.2	20.0
Trichlorofluoromethane	Ave	0.3523	0.3836	0.1000	10.9	10.0	8.9	20.0
Ethyl ether	Ave	0.3265	0.2832	0.0100	8.67	10.0	-13.3	20.0
Acrolein	Ave	0.0486	0.0475	0.0100	29.3	30.0	-2.3	20.0
1,1-Dichloroethene	Ave	0.2785	0.2700	0.1000	9.70	10.0	-3.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2951	0.2954	0.1000	10.0	10.0	0.1	20.0
Acetone	Ave	0.1009	0.0840	0.0500	16.6	20.0	-16.8	20.0
Iodomethane	Ave	0.4150	0.4256	0.0100	10.3	10.0	2.6	20.0
Carbon disulfide	Ave	0.6466	0.6855	0.1000	10.6	10.0	6.0	20.0
Allyl chloride	Ave	0.1577	0.1416	0.0100	8.98	10.0	-10.2	20.0
Methyl acetate	Ave	0.3015	0.2944	0.1000	48.8	50.0	-2.3	20.0
Methylene Chloride	Lin2		0.3186	0.1000	9.71	10.0	-2.9	20.0
tert-Butyl alcohol	Ave	1.126	1.156	0.0100	103	100	2.7	20.0
Acrylonitrile	Ave	0.1463	0.1372	0.0100	93.8	100	-6.2	20.0
trans-1,2-Dichloroethene	Ave	0.3024	0.2987	0.1000	9.88	10.0	-1.2	20.0
Methyl tert-butyl ether	Ave	0.6999	0.6062	0.1000	8.66	10.0	-13.4	20.0
Hexane	Ave	0.5076	0.4734	0.0100	9.33	10.0	-6.7	20.0
1,1-Dichloroethane	Ave	0.5957	0.5573	0.2000	9.36	10.0	-6.4	20.0
Vinyl acetate	Ave	0.4469	0.4933	0.0100	11.0	10.0	10.4	20.0
cis-1,2-Dichloroethene	Ave	0.3230	0.2998	0.1000	9.28	10.0	-7.2	20.0
2,2-Dichloropropane	Ave	0.2387	0.2020	0.0100	8.46	10.0	-15.4	20.0
2-Butanone (MEK)	Ave	0.1516	0.1175	0.0500	15.5	20.0	-22.5*	20.0
Bromochloromethane	Ave	0.1418	0.1415	0.0100	9.98	10.0	-0.2	20.0
Tetrahydrofuran	Ave	0.1216	0.0998	0.0100	16.4	20.0	-17.9	20.0
Chloroform	Ave	0.5146	0.4675	0.2000	9.08	10.0	-9.2	20.0
1,1,1-Trichloroethane	Ave	0.3805	0.3546	0.1000	9.32	10.0	-6.8	20.0
Cyclohexane	Ave	0.6367	0.5895	0.1000	9.26	10.0	-7.4	20.0
Carbon tetrachloride	Ave	0.3240	0.3241	0.1000	10.0	10.0	0.0	20.0
1,1-Dichloropropene	Ave	0.4208	0.3853	0.0100	9.16	10.0	-8.4	20.0
Isobutyl alcohol	Ave	0.0095	0.0090*	0.0100	235	250	-5.9	20.0
Benzene	Ave	1.233	1.186	0.5000	9.62	10.0	-3.8	20.0
1,2-Dichloroethane	Ave	0.4264	0.3720	0.1000	8.72	10.0	-12.8	20.0
n-Heptane	Ave	0.4611	0.4678	0.0100	10.1	10.0	1.4	20.0
Trichloroethene	Ave	0.3016	0.3056	0.2000	10.1	10.0	1.3	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-155398/2 Calibration Date: 09/30/2015 11:16  
 Instrument ID: CHHP5 Calib Start Date: 08/26/2015 15:04  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/26/2015 17:52  
 Lab File ID: 50930002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4753	0.4583	0.1000	9.64	10.0	-3.6	20.0
1,2-Dichloropropane	Ave	0.3235	0.2983	0.1000	9.22	10.0	-7.8	20.0
1,4-Dioxane	Ave	0.0022	0.0022*	0.0100	193	200	-3.3	20.0
Dibromomethane	Ave	0.1642	0.1531	0.0100	9.32	10.0	-6.8	20.0
Bromodichloromethane	Ave	0.3249	0.3132	0.2000	9.64	10.0	-3.6	20.0
cis-1,3-Dichloropropene	Ave	0.3807	0.3232	0.2000	8.49	10.0	-15.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.232	0.9358	0.1000	15.2	20.0	-24.0*	20.0
Toluene	Ave	4.950	5.181	0.4000	10.5	10.0	4.7	20.0
trans-1,3-Dichloropropene	Ave	1.292	1.185	0.1000	9.17	10.0	-8.3	20.0
Ethyl methacrylate	Ave	1.249	1.117	0.0100	8.94	10.0	-10.6	20.0
1,1,2-Trichloroethane	Ave	0.9416	0.9343	0.1000	9.92	10.0	-0.8	20.0
Tetrachloroethene	Ave	0.9609	1.068	0.2000	11.1	10.0	11.2	20.0
1,3-Dichloropropane	Ave	1.748	1.653	0.0100	9.45	10.0	-5.5	20.0
2-Hexanone	Ave	0.8893	0.6439	0.1000	14.5	20.0	-27.6*	20.0
Dibromochloromethane	Ave	0.8152	0.8943	0.1000	11.0	10.0	9.7	20.0
1,2-Dibromoethane (EDB)	Ave	0.9073	0.9114	0.1000	10.0	10.0	0.4	20.0
3-Chlorobenzotrifluoride	Ave	1.591	1.666	0.0100	10.5	10.0	4.7	20.0
Chlorobenzene	Ave	3.187	3.290	0.5000	10.3	10.0	3.2	20.0
4-Chlorobenzotrifluoride	Ave	1.504	1.579	0.0100	10.5	10.0	5.0	20.0
1,1,1,2-Tetrachloroethane	Ave	1.039	1.110	0.0100	10.7	10.0	6.8	20.0
Ethylbenzene	Ave	1.690	1.776	0.1000	10.5	10.0	5.1	20.0
m-Xylene & p-Xylene	Ave	2.072	2.208	0.1000	10.7	10.0	6.6	20.0
o-Xylene	Ave	1.969	2.077	0.3000	10.6	10.0	5.5	20.0
Styrene	Ave	3.262	3.508	0.3000	10.8	10.0	7.5	20.0
Bromoform	Ave	0.4652	0.4744	0.1000	10.2	10.0	2.0	20.0
2-Chlorobenzotrifluoride	Ave	1.565	1.632	0.0100	10.4	10.0	4.3	20.0
Isopropylbenzene	Ave	4.822	5.179	0.1000	10.7	10.0	7.4	20.0
1,1,2,2-Tetrachloroethane	Ave	1.270	1.247	0.3000	9.82	10.0	-1.8	20.0
Bromobenzene	Ave	0.8583	0.8651	0.0100	10.1	10.0	0.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.3103	0.1157	0.0100	3.73	10.0	-62.7*	20.0
1,2,3-Trichloropropane	Ave	0.2831	0.2644	0.0100	9.34	10.0	-6.6	20.0
N-Propylbenzene	Ave	0.9825	0.9726	0.0100	9.90	10.0	-1.0	20.0
2-Chlorotoluene	Ave	0.8351	0.8512	0.0100	10.2	10.0	1.9	20.0
3-Chlorotoluene	Ave	0.8583	0.8535	0.0100	9.94	10.0	-0.6	20.0
1,3,5-Trimethylbenzene	Ave	2.776	2.896	0.0100	10.4	10.0	4.3	20.0
4-Chlorotoluene	Ave	0.9190	0.9429	0.0100	10.3	10.0	2.6	20.0
tert-Butylbenzene	Ave	2.257	2.304	0.0100	10.2	10.0	2.1	20.0
1,2,4-Trimethylbenzene	Ave	2.781	2.861	0.0100	10.3	10.0	2.9	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.7754	0.7170	0.0100	9.25	10.0	-7.5	20.0
sec-Butylbenzene	Ave	3.187	3.340	0.0100	10.5	10.0	4.8	20.0
1,3-Dichlorobenzene	Ave	1.528	1.655	0.6000	10.8	10.0	8.3	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-155398/2 Calibration Date: 09/30/2015 11:16  
 Instrument ID: CHHP5 Calib Start Date: 08/26/2015 15:04  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/26/2015 17:52  
 Lab File ID: 50930002.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	2.696	2.834	0.0100	10.5	10.0	5.1	20.0
1,4-Dichlorobenzene	Ave	1.590	1.668	0.5000	10.5	10.0	5.0	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7185	0.7143	0.0100	9.94	10.0	-0.6	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.7765	0.7109	0.0100	9.16	10.0	-8.4	20.0
n-Butylbenzene	Ave	2.307	2.234	0.0100	9.68	10.0	-3.2	20.0
1,2-Dichlorobenzene	Ave	1.428	1.521	0.4000	10.7	10.0	6.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1173	0.1098	0.0500	9.37	10.0	-6.3	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.8157	0.8474	0.0100	31.2	30.0	3.9	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.7778	0.8133	0.0100	20.9	20.0	4.6	20.0
1,2,4-Trichlorobenzene	Ave	0.5557	0.6005	0.2000	10.8	10.0	8.1	20.0
Hexachlorobutadiene	Ave	0.2677	0.3034	0.0100	11.3	10.0	13.3	20.0
Naphthalene	Ave	1.428	1.505	0.0100	10.5	10.0	5.4	20.0
1,2,3-Trichlorobenzene	Ave	0.4498	0.4895	0.0100	10.9	10.0	8.8	20.0
2,4,5-Trichlorotoluene	Ave	0.1623	0.1539	0.0100	9.48	10.0	-5.2	20.0
2,3,6-Trichlorotoluene	Ave	0.1496	0.1530	0.0100	10.2	10.0	2.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2455	0.2297		9.35	10.0	-6.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3373	0.2870		8.51	10.0	-14.9	20.0
Toluene-d8 (Surr)	Ave	3.857	3.789		9.82	10.0	-1.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.455	1.381		9.49	10.0	-5.1	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930002.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 30-Sep-2015 11:16:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 180-0008759-002  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Sep-2015 12:42:39 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK004

First Level Reviewer: fergusond

Date: 30-Sep-2015 11:45:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.273	4.273	0.000	0	104384	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.290	7.290	0.000	98	332995	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.387	0.000	87	79470	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.729	12.729	0.000	94	122333	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.560	6.560	0.000	94	76476	50.0	46.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.932	6.932	0.000	0	95556	50.0	42.5	
\$ 7 Toluene-d8 (Surr)	98	8.933	8.933	0.000	94	301116	50.0	49.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.573	11.573	0.000	89	109777	50.0	47.5	
11 Dichlorodifluoromethane	85	1.602	1.602	0.000	100	108509	50.0	57.7	
12 Chloromethane	50	1.773	1.773	0.000	99	152362	50.0	55.2	
13 Vinyl chloride	62	1.907	1.907	0.000	98	125932	50.0	51.4	
14 Butadiene	39	1.943	1.943	0.000	96	171409	50.0	59.2	
15 Bromomethane	94	2.241	2.241	0.000	91	55077	50.0	55.2	
16 Chloroethane	64	2.393	2.393	0.000	99	71403	50.0	48.3	
17 Dichlorofluoromethane	67	2.673	2.673	0.000	97	158732	50.0	50.6	
18 Trichlorofluoromethane	101	2.710	2.710	0.000	99	127735	50.0	54.4	
20 Ethyl ether	59	3.044	3.044	0.000	96	94300	50.0	43.4	
21 Acrolein	56	3.227	3.227	0.000	98	47471	150.0	146.5	
22 1,1-Dichloroethene	96	3.342	3.342	0.000	96	89908	50.0	48.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.421	3.421	0.000	90	98366	50.0	50.1	
24 Acetone	43	3.446	3.446	0.000	86	55931	100.0	83.2	
25 Iodomethane	142	3.531	3.531	0.000	97	141732	50.0	51.3	
26 Carbon disulfide	76	3.628	3.628	0.000	100	228278	50.0	53.0	
28 3-Chloro-1-propene	76	3.914	3.914	0.000	90	47162	50.0	44.9	
30 Methyl acetate	43	3.932	3.932	0.000	100	490242	250.0	244.2	
31 Methylene Chloride	84	4.139	4.139	0.000	97	106090	50.0	48.5	
32 2-Methyl-2-propanol	59	4.413	4.413	0.000	89	60349	500.0	513.7	
33 Acrylonitrile	53	4.522	4.522	0.000	99	456738	500.0	468.9	
34 trans-1,2-Dichloroethene	96	4.565	4.565	0.000	97	99470	50.0	49.4	
35 Methyl tert-butyl ether	73	4.577	4.577	0.000	94	201859	50.0	43.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.985	4.985	0.000	96	157644	50.0	46.6	
37 1,1-Dichloroethane	63	5.198	5.198	0.000	96	185580	50.0	46.8	
38 Vinyl acetate	43	5.253	5.253	0.000	97	164258	50.0	55.2	
45 cis-1,2-Dichloroethene	96	5.946	5.946	0.000	84	99842	50.0	46.4	
44 2,2-Dichloropropane	77	5.952	5.952	0.000	57	67249	50.0	42.3	
46 2-Butanone (MEK)	43	5.958	5.958	0.000	61	78258	100.0	77.5	
49 Chlorobromomethane	128	6.232	6.232	0.000	94	47120	50.0	49.9	
51 Tetrahydrofuran	42	6.244	6.244	0.000	90	66446	100.0	82.1	
52 Chloroform	83	6.384	6.384	0.000	95	155682	50.0	45.4	
53 1,1,1-Trichloroethane	97	6.536	6.536	0.000	96	118084	50.0	46.6	
54 Cyclohexane	56	6.615	6.615	0.000	95	196301	50.0	46.3	
56 Carbon tetrachloride	117	6.713	6.713	0.000	97	107924	50.0	50.0	
55 1,1-Dichloropropene	75	6.731	6.731	0.000	89	128304	50.0	45.8	
57 Isobutyl alcohol	41	6.925	6.925	0.000	88	74557	1250.0	1175.7	
58 Benzene	78	6.944	6.944	0.000	98	394865	50.0	48.1	
59 1,2-Dichloroethane	62	7.023	7.023	0.000	96	123862	50.0	43.6	
62 n-Heptane	43	7.309	7.309	0.000	97	155761	50.0	50.7	
64 Trichloroethene	130	7.674	7.674	0.000	96	101751	50.0	50.7	
66 Methylcyclohexane	83	7.917	7.917	0.000	95	152615	50.0	48.2	
67 1,2-Dichloropropane	63	7.947	7.947	0.000	96	99320	50.0	46.1	
70 1,4-Dioxane	88	8.027	8.027	0.000	41	14366	1000.0	967.2	M
68 Dibromomethane	93	8.039	8.039	0.000	94	50974	50.0	46.6	
71 Dichlorobromomethane	83	8.227	8.227	0.000	98	104296	50.0	48.2	
74 cis-1,3-Dichloropropene	75	8.671	8.671	0.000	90	107620	50.0	42.4	
75 4-Methyl-2-pentanone (MIBK)	43	8.830	8.830	0.000	99	148730	100.0	76.0	
76 Toluene	91	9.000	9.000	0.000	96	411727	50.0	52.3	
77 trans-1,3-Dichloropropene	75	9.249	9.249	0.000	99	94190	50.0	45.9	
78 Ethyl methacrylate	69	9.310	9.310	0.000	95	88730	50.0	44.7	
79 1,1,2-Trichloroethane	97	9.450	9.450	0.000	93	74249	50.0	49.6	
80 Tetrachloroethene	164	9.517	9.517	0.000	97	84901	50.0	55.6	
81 1,3-Dichloropropane	76	9.602	9.602	0.000	97	131336	50.0	47.3	
82 2-Hexanone	43	9.657	9.657	0.000	99	102336	100.0	72.4	
84 Chlorodibromomethane	129	9.815	9.815	0.000	91	71073	50.0	54.9	
85 Ethylene Dibromide	107	9.931	9.931	0.000	97	72425	50.0	50.2	
86 3-Chlorobenzotrifluoride	180	10.387	10.387	0.000	84	132389	50.0	52.4	
87 Chlorobenzene	112	10.417	10.417	0.000	95	261432	50.0	51.6	
88 4-Chlorobenzotrifluoride	180	10.478	10.478	0.000	95	125502	50.0	52.5	
89 1,1,1,2-Tetrachloroethane	131	10.509	10.509	0.000	92	88176	50.0	53.4	
90 Ethylbenzene	106	10.515	10.515	0.000	98	141138	50.0	52.6	
91 m-Xylene & p-Xylene	106	10.649	10.649	0.000	0	175488	50.0	53.3	
92 o-Xylene	106	11.026	11.026	0.000	97	165090	50.0	52.8	
93 Styrene	104	11.044	11.044	0.000	96	278742	50.0	53.8	
94 Bromoform	173	11.233	11.233	0.000	95	37700	50.0	51.0	
96 2-Chlorobenzotrifluoride	180	11.299	11.299	0.000	96	129690	50.0	52.1	
97 Isopropylbenzene	105	11.397	11.397	0.000	96	411563	50.0	53.7	
99 1,1,2,2-Tetrachloroethane	83	11.707	11.707	0.000	83	99075	50.0	49.1	
100 Bromobenzene	156	11.707	11.707	0.000	93	105828	50.0	50.4	
102 trans-1,4-Dichloro-2-buten	53	11.744	11.744	0.000	70	14157	50.0	18.6	
101 1,2,3-Trichloropropane	110	11.768	11.768	0.000	87	32340	50.0	46.7	
103 N-Propylbenzene	120	11.810	11.810	0.000	99	118986	50.0	49.5	
104 2-Chlorotoluene	126	11.902	11.902	0.000	97	104129	50.0	51.0	
105 3-Chlorotoluene	126	11.963	11.963	0.000	94	104411	50.0	49.7	

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	11.993	11.993	0.000	94	354266	50.0	52.2	
107 4-Chlorotoluene	126	12.023	12.023	0.000	98	115345	50.0	51.3	
108 tert-Butylbenzene	119	12.309	12.309	0.000	95	281855	50.0	51.0	
110 1,2,4-Trimethylbenzene	105	12.370	12.370	0.000	97	349990	50.0	51.4	
111 1,2-dichloro-4-(trifluorom	214	12.407	12.407	0.000	98	87708	50.0	46.2	
112 sec-Butylbenzene	105	12.528	12.528	0.000	94	408553	50.0	52.4	
113 1,3-Dichlorobenzene	146	12.650	12.650	0.000	99	202501	50.0	54.2	
114 4-Isopropyltoluene	119	12.686	12.686	0.000	97	346632	50.0	52.6	
115 1,4-Dichlorobenzene	146	12.753	12.753	0.000	94	204095	50.0	52.5	
116 2,4-Dichloro-1-(trifluorom	214	12.778	12.778	0.000	96	87382	50.0	49.7	
118 2,5-Dichlorobenzotrifluori	214	12.820	12.820	0.000	0	86967	50.0	45.8	
120 n-Butylbenzene	91	13.094	13.094	0.000	98	273271	50.0	48.4	
121 1,2-Dichlorobenzene	146	13.106	13.106	0.000	97	186129	50.0	53.3	
122 1,2-Dibromo-3-Chloropropan	75	13.903	13.903	0.000	81	13435	50.0	46.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.043	14.043	0.000	0	310987	150.0	155.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.463	14.463	0.000	0	198980	100.0	104.6	
126 1,2,4-Trichlorobenzene	180	14.724	14.724	0.000	94	73457	50.0	54.0	
127 Hexachlorobutadiene	225	14.870	14.870	0.000	97	37114	50.0	56.7	
128 Naphthalene	128	14.986	14.986	0.000	97	184131	50.0	52.7	
129 1,2,3-Trichlorobenzene	180	15.217	15.217	0.000	96	59881	50.0	54.4	
131 2,4,5-Trichlorotoluene	159	15.990	15.990	0.000	0	18821	50.0	47.4	
130 2,3,6-Trichlorotoluene	159	16.093	16.093	0.000	98	18717	50.0	51.1	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	95.8	
S 133 Xylenes, Total	106				0		100.0	106.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	88.3	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

voaWAcro1stRe_00001	Amount Added: 6.00	Units: uL	
voaWKet1stRes_00001	Amount Added: 2.00	Units: uL	
VOA8260VOAPRI_00145	Amount Added: 2.00	Units: uL	
VOAVAPRI_00007	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00006	Amount Added: 2.00	Units: uL	
VOA8260INT_00042	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00042	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930002.D

Injection Date: 30-Sep-2015 11:16:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

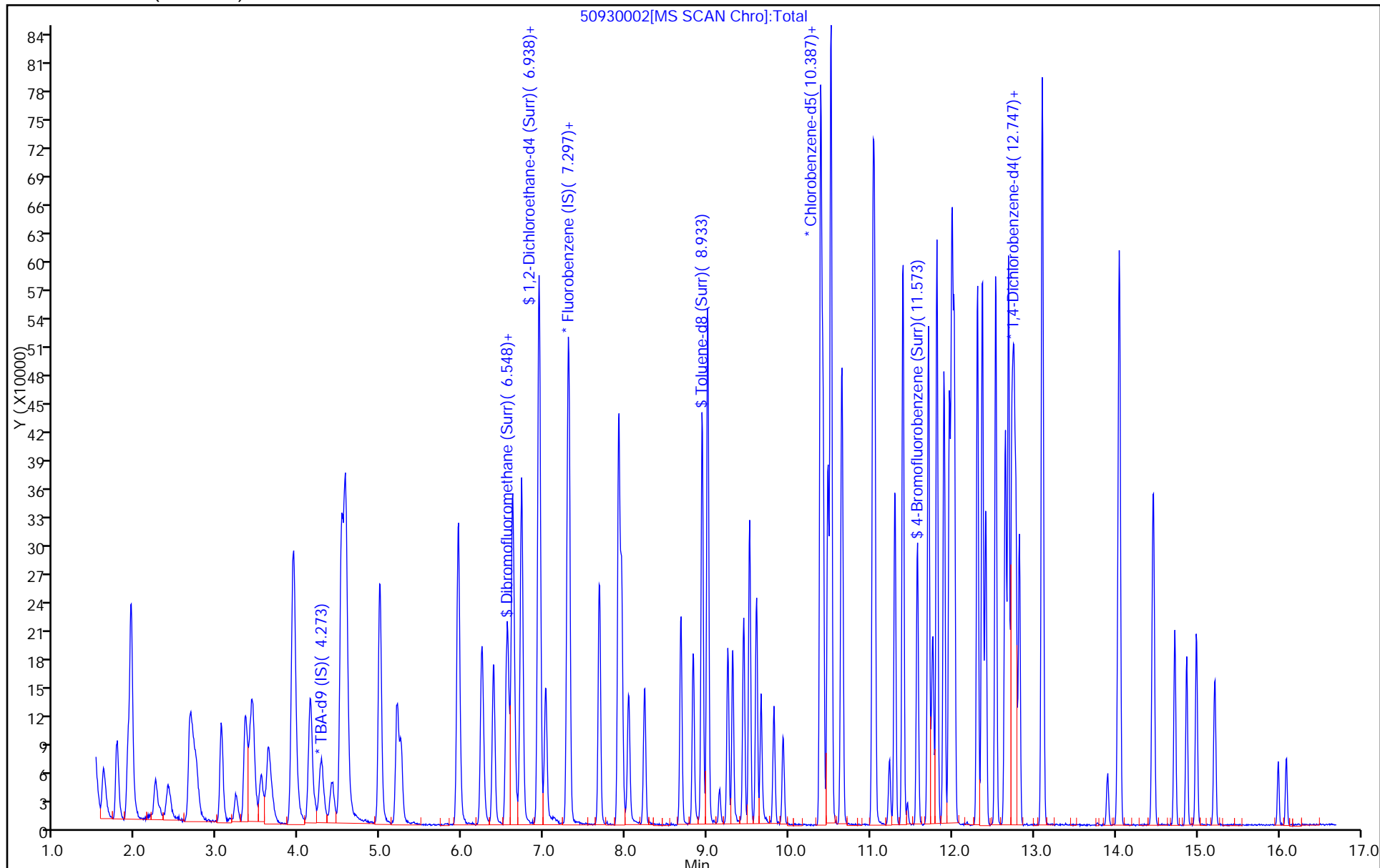
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



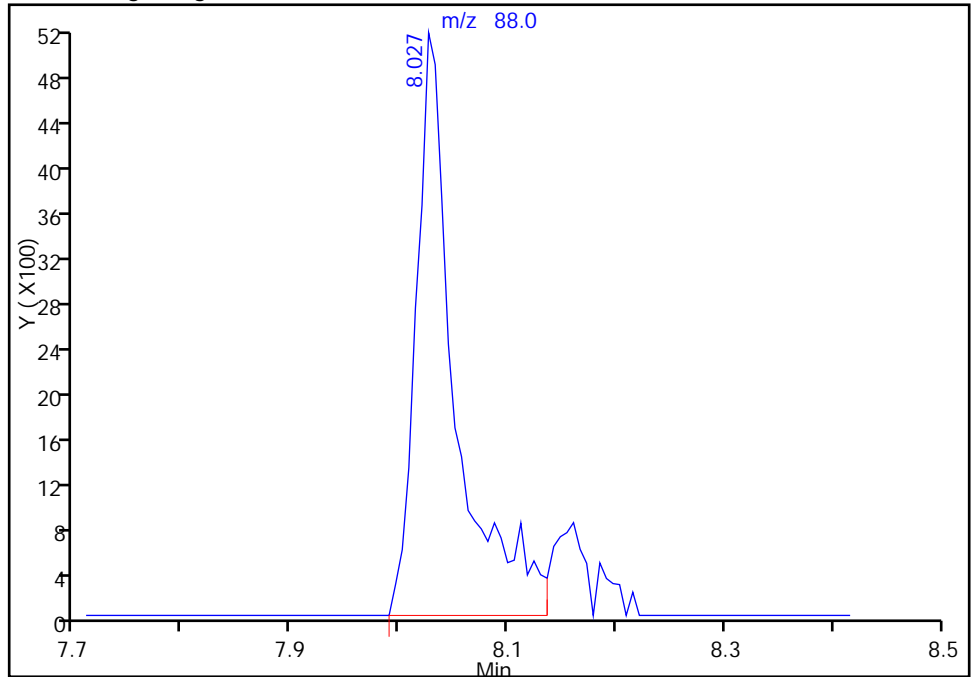
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930002.D  
Injection Date: 30-Sep-2015 11:16:30 Instrument ID: CHHP5  
Lims ID: CCVIS  
Client ID:  
Operator ID: 001562 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

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

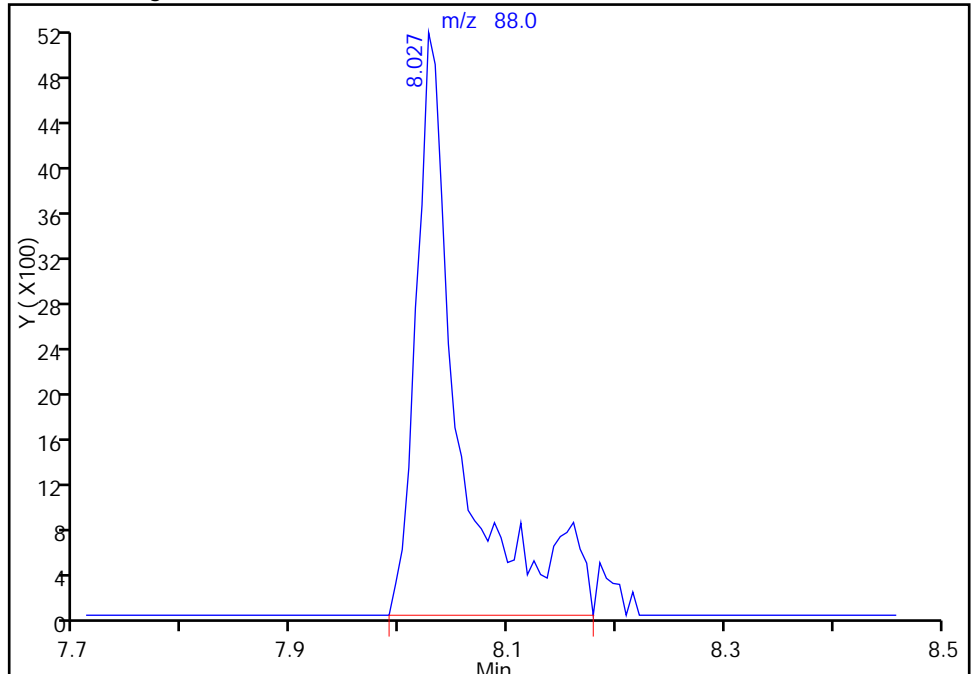
RT: 8.03  
Area: 12949  
Amount: 871.7668  
Amount Units: ng

Processing Integration Results



RT: 8.03  
Area: 14366  
Amount: 967.1636  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 30-Sep-2015 11:45:31  
Audit Action: Manually Integrated  
Audit Reason: Incomplete Integration



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-155577/2 Calibration Date: 10/01/2015 13:46  
 Instrument ID: CHHP5 Calib Start Date: 08/26/2015 15:04  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/26/2015 17:52  
 Lab File ID: 51001002.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	0.2825	0.2975	0.1000	10.5	10.0	5.3	20.0
Chloromethane	Ave	0.4148	0.4329	0.1000	10.4	10.0	4.4	20.0
Vinyl chloride	Ave	0.3679	0.3474	0.1000	9.44	10.0	-5.6	20.0
1,3-Butadiene	Ave	0.4345	0.4568	0.0100	10.5	10.0	5.1	20.0
Bromomethane	Ave	0.1497	0.1348	0.0500	9.00	10.0	-10.0	20.0
Chloroethane	Ave	0.2220	0.2037	0.0500	9.18	10.0	-8.2	20.0
Dichlorofluoromethane	Ave	0.4709	0.4178	0.0100	8.87	10.0	-11.3	20.0
Trichlorofluoromethane	Ave	0.3523	0.3499	0.1000	9.93	10.0	-0.7	20.0
Ethyl ether	Ave	0.3265	0.2734	0.0100	8.37	10.0	-16.3	20.0
Acrolein	Ave	0.0486	0.0413	0.0100	25.5	30.0	-15.1	20.0
1,1-Dichloroethene	Ave	0.2785	0.2442	0.1000	8.77	10.0	-12.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2951	0.2644	0.1000	8.96	10.0	-10.4	20.0
Acetone	Ave	0.1009	0.0919	0.0500	18.2	20.0	-8.9	20.0
Iodomethane	Ave	0.4150	0.3901	0.0100	9.40	10.0	-6.0	20.0
Carbon disulfide	Ave	0.6466	0.5413	0.1000	8.37	10.0	-16.3	20.0
Allyl chloride	Ave	0.1577	0.1272	0.0100	8.07	10.0	-19.3	20.0
Methyl acetate	Ave	0.3015	0.2760	0.1000	45.8	50.0	-8.4	20.0
Methylene Chloride	Lin2		0.3182	0.1000	9.69	10.0	-3.1	20.0
tert-Butyl alcohol	Ave	1.126	1.156	0.0100	103	100	2.7	20.0
Acrylonitrile	Ave	0.1463	0.1315	0.0100	89.9	100	-10.1	20.0
trans-1,2-Dichloroethene	Ave	0.3024	0.2568	0.1000	8.49	10.0	-15.1	20.0
Methyl tert-butyl ether	Ave	0.6999	0.5722	0.1000	8.18	10.0	-18.2	20.0
Hexane	Ave	0.5076	0.4381	0.0100	8.63	10.0	-13.7	20.0
1,1-Dichloroethane	Ave	0.5957	0.5060	0.2000	8.50	10.0	-15.0	20.0
Vinyl acetate	Ave	0.4469	0.5286	0.0100	11.8	10.0	18.3	20.0
2,2-Dichloropropane	Ave	0.2387	0.1820	0.0100	7.62	10.0	-23.8*	20.0
cis-1,2-Dichloroethene	Ave	0.3230	0.2742	0.1000	8.49	10.0	-15.1	20.0
2-Butanone (MEK)	Ave	0.1516	0.1212	0.0500	16.0	20.0	-20.0	20.0
Bromochloromethane	Ave	0.1418	0.1349	0.0100	9.51	10.0	-4.9	20.0
Tetrahydrofuran	Ave	0.1216	0.1021	0.0100	16.8	20.0	-16.0	20.0
Chloroform	Ave	0.5146	0.4354	0.2000	8.46	10.0	-15.4	20.0
1,1,1-Trichloroethane	Ave	0.3805	0.3263	0.1000	8.57	10.0	-14.3	20.0
Cyclohexane	Ave	0.6367	0.5359	0.1000	8.42	10.0	-15.8	20.0
Carbon tetrachloride	Ave	0.3240	0.2841	0.1000	8.77	10.0	-12.3	20.0
1,1-Dichloropropene	Ave	0.4208	0.3554	0.0100	8.45	10.0	-15.5	20.0
Isobutyl alcohol	Ave	0.0095	0.0094*	0.0100	247	250	-1.3	20.0
Benzene	Ave	1.233	1.099	0.5000	8.91	10.0	-10.9	20.0
1,2-Dichloroethane	Ave	0.4264	0.3541	0.1000	8.30	10.0	-17.0	20.0
n-Heptane	Ave	0.4611	0.4247	0.0100	9.21	10.0	-7.9	20.0
Trichloroethene	Ave	0.3016	0.2743	0.2000	9.09	10.0	-9.1	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-155577/2 Calibration Date: 10/01/2015 13:46  
 Instrument ID: CHHP5 Calib Start Date: 08/26/2015 15:04  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/26/2015 17:52  
 Lab File ID: 51001002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4753	0.4181	0.1000	8.80	10.0	-12.0	20.0
1,2-Dichloropropane	Ave	0.3235	0.2737	0.1000	8.46	10.0	-15.4	20.0
1,4-Dioxane	Ave	0.0022	0.0021*	0.0100	189	200	-5.6	20.0
Dibromomethane	Ave	0.1642	0.1390	0.0100	8.47	10.0	-15.3	20.0
Bromodichloromethane	Ave	0.3249	0.2639	0.2000	8.12	10.0	-18.8	20.0
cis-1,3-Dichloropropene	Ave	0.3807	0.2902	0.2000	7.62	10.0	-23.8*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.232	0.9678	0.1000	15.7	20.0	-21.4*	20.0
Toluene	Ave	4.950	4.802	0.4000	9.70	10.0	-3.0	20.0
trans-1,3-Dichloropropene	Ave	1.292	1.058	0.1000	8.19	10.0	-18.1	20.0
Ethyl methacrylate	Ave	1.249	1.064	0.0100	8.52	10.0	-14.8	20.0
1,1,2-Trichloroethane	Ave	0.9416	0.8860	0.1000	9.41	10.0	-5.9	20.0
Tetrachloroethene	Ave	0.9609	0.9777	0.2000	10.2	10.0	1.8	20.0
1,3-Dichloropropane	Ave	1.748	1.560	0.0100	8.93	10.0	-10.7	20.0
2-Hexanone	Ave	0.8893	0.6325	0.1000	14.2	20.0	-28.9*	20.0
Dibromochloromethane	Ave	0.8152	0.7357	0.1000	9.03	10.0	-9.7	20.0
1,2-Dibromoethane (EDB)	Ave	0.9073	0.8526	0.1000	9.40	10.0	-6.0	20.0
3-Chlorobenzotrifluoride	Ave	1.591	1.617	0.0100	10.2	10.0	1.7	20.0
Chlorobenzene	Ave	3.187	3.091	0.5000	9.70	10.0	-3.0	20.0
4-Chlorobenzotrifluoride	Ave	1.504	1.530	0.0100	10.2	10.0	1.7	20.0
1,1,1,2-Tetrachloroethane	Ave	1.039	0.9874	0.0100	9.50	10.0	-5.0	20.0
Ethylbenzene	Ave	1.690	1.632	0.1000	9.66	10.0	-3.4	20.0
m-Xylene & p-Xylene	Ave	2.072	2.046	0.1000	9.88	10.0	-1.2	20.0
o-Xylene	Ave	1.969	1.964	0.3000	9.98	10.0	-0.2	20.0
Styrene	Ave	3.262	3.243	0.3000	9.94	10.0	-0.6	20.0
Bromoform	Ave	0.4652	0.3736	0.1000	8.03	10.0	-19.7	20.0
2-Chlorobenzotrifluoride	Ave	1.565	1.567	0.0100	10.0	10.0	0.1	20.0
Isopropylbenzene	Ave	4.822	4.823	0.1000	10.0	10.0	0.0	20.0
1,1,2,2-Tetrachloroethane	Ave	1.270	1.227	0.3000	9.66	10.0	-3.4	20.0
Bromobenzene	Ave	0.8583	0.7895	0.0100	9.20	10.0	-8.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.3103	0.1593	0.0100	5.13	10.0	-48.7*	20.0
1,2,3-Trichloropropane	Ave	0.2831	0.2625	0.0100	9.27	10.0	-7.3	20.0
N-Propylbenzene	Ave	0.9825	0.8784	0.0100	8.94	10.0	-10.6	20.0
2-Chlorotoluene	Ave	0.8351	0.7942	0.0100	9.51	10.0	-4.9	20.0
3-Chlorotoluene	Ave	0.8583	0.8569	0.0100	9.98	10.0	-0.2	20.0
1,3,5-Trimethylbenzene	Ave	2.776	2.694	0.0100	9.71	10.0	-2.9	20.0
4-Chlorotoluene	Ave	0.9190	0.8755	0.0100	9.53	10.0	-4.7	20.0
tert-Butylbenzene	Ave	2.257	2.115	0.0100	9.37	10.0	-6.3	20.0
1,2,4-Trimethylbenzene	Ave	2.781	2.645	0.0100	9.51	10.0	-4.9	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.7754	0.7247	0.0100	9.35	10.0	-6.5	20.0
sec-Butylbenzene	Ave	3.187	3.091	0.0100	9.70	10.0	-3.0	20.0
1,3-Dichlorobenzene	Ave	1.528	1.552	0.6000	10.2	10.0	1.5	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-155577/2 Calibration Date: 10/01/2015 13:46  
 Instrument ID: CHHP5 Calib Start Date: 08/26/2015 15:04  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 08/26/2015 17:52  
 Lab File ID: 51001002.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	2.696	2.679	0.0100	9.94	10.0	-0.6	20.0
1,4-Dichlorobenzene	Ave	1.590	1.610	0.5000	10.1	10.0	1.3	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.7185	0.6991	0.0100	9.73	10.0	-2.7	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.7765	0.7400	0.0100	9.53	10.0	-4.7	20.0
n-Butylbenzene	Ave	2.307	2.152	0.0100	9.33	10.0	-6.7	20.0
1,2-Dichlorobenzene	Ave	1.428	1.485	0.4000	10.4	10.0	3.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1173	0.0968	0.0500	8.26	10.0	-17.4	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.8157	0.9009	0.0100	33.1	30.0	10.4	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.7778	0.8481	0.0100	21.8	20.0	9.0	20.0
1,2,4-Trichlorobenzene	Ave	0.5557	0.5993	0.2000	10.8	10.0	7.8	20.0
Hexachlorobutadiene	Ave	0.2677	0.2970	0.0100	11.1	10.0	11.0	20.0
Naphthalene	Ave	1.428	1.605	0.0100	11.2	10.0	12.4	20.0
1,2,3-Trichlorobenzene	Ave	0.4498	0.4927	0.0100	11.0	10.0	9.5	20.0
2,4,5-Trichlorotoluene	Ave	0.1623	0.1888	0.0100	11.6	10.0	16.3	20.0
2,3,6-Trichlorotoluene	Ave	0.1496	0.1704	0.0100	11.4	10.0	13.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2455	0.2118		8.63	10.0	-13.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3373	0.2712		8.04	10.0	-19.6	20.0
Toluene-d8 (Surr)	Ave	3.857	3.761		9.75	10.0	-2.5	20.0
4-Bromofluorobenzene (Surr)	Ave	1.455	1.402		9.64	10.0	-3.6	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001002.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 01-Oct-2015 13:46:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 180-0008778-002  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 17:42:30 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 14:01:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.278	4.278	0.000	0	102757	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	98	357732	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.386	0.000	89	84581	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.728	0.000	95	134719	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.559	6.559	0.000	93	75775	50.0	43.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.936	0.000	0	97022	50.0	40.2	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	94	318126	50.0	48.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.572	0.000	90	118605	50.0	48.2	
11 Dichlorodifluoromethane	85	1.613	1.613	0.000	99	106420	50.0	52.7	
12 Chloromethane	50	1.759	1.759	0.000	99	154867	50.0	52.2	
13 Vinyl chloride	62	1.905	1.905	0.000	98	124277	50.0	47.2	
14 Butadiene	39	1.936	1.936	0.000	98	163421	50.0	52.6	
15 Bromomethane	94	2.234	2.234	0.000	92	48207	50.0	45.0	
16 Chloroethane	64	2.386	2.386	0.000	99	72855	50.0	45.9	
17 Dichlorofluoromethane	67	2.666	2.666	0.000	98	149461	50.0	44.4	
18 Trichlorofluoromethane	101	2.702	2.702	0.000	84	125185	50.0	49.7	
20 Ethyl ether	59	3.049	3.049	0.000	97	97796	50.0	41.9	
21 Acrolein	56	3.232	3.232	0.000	98	44335	150.0	127.4	
22 1,1-Dichloroethene	96	3.347	3.347	0.000	97	87341	50.0	43.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.414	3.414	0.000	90	94577	50.0	44.8	
24 Acetone	43	3.438	3.438	0.000	82	65745	100.0	91.1	
25 Iodomethane	142	3.542	3.542	0.000	97	139549	50.0	47.0	
26 Carbon disulfide	76	3.633	3.633	0.000	100	193650	50.0	41.9	
28 3-Chloro-1-propene	76	3.925	3.925	0.000	88	45519	50.0	40.3	
30 Methyl acetate	43	3.937	3.937	0.000	99	493721	250.0	228.9	
31 Methylene Chloride	84	4.138	4.138	0.000	98	113841	50.0	48.5	
32 2-Methyl-2-propanol	59	4.406	4.406	0.000	88	59384	500.0	513.5	
33 Acrylonitrile	53	4.521	4.521	0.000	97	470343	500.0	449.4	
34 trans-1,2-Dichloroethene	96	4.564	4.564	0.000	97	91854	50.0	42.5	
35 Methyl tert-butyl ether	73	4.576	4.576	0.000	95	204704	50.0	40.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.990	4.990	0.000	95	156732	50.0	43.2	
37 1,1-Dichloroethane	63	5.196	5.196	0.000	97	181024	50.0	42.5	
38 Vinyl acetate	43	5.245	5.245	0.000	97	189093	50.0	59.1	
44 2,2-Dichloropropane	77	5.945	5.945	0.000	57	65088	50.0	38.1	
45 cis-1,2-Dichloroethene	96	5.951	5.951	0.000	83	98080	50.0	42.4	
46 2-Butanone (MEK)	43	5.957	5.957	0.000	66	86713	100.0	80.0	
49 Chlorobromomethane	128	6.231	6.231	0.000	94	48247	50.0	47.5	
51 Tetrahydrofuran	42	6.249	6.249	0.000	92	73049	100.0	84.0	
52 Chloroform	83	6.383	6.383	0.000	95	155740	50.0	42.3	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	95	116719	50.0	42.9	
54 Cyclohexane	56	6.614	6.614	0.000	97	191713	50.0	42.1	
56 Carbon tetrachloride	117	6.711	6.711	0.000	96	101623	50.0	43.8	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	90	127132	50.0	42.2	
57 Isobutyl alcohol	41	6.924	6.924	0.000	90	84063	1250.0	1234.0	
58 Benzene	78	6.942	6.942	0.000	98	393012	50.0	44.6	
59 1,2-Dichloroethane	62	7.022	7.022	0.000	96	126675	50.0	41.5	
62 n-Heptane	43	7.307	7.307	0.000	97	151940	50.0	46.1	
64 Trichloroethene	130	7.679	7.679	0.000	96	98126	50.0	45.5	
66 Methylcyclohexane	83	7.916	7.916	0.000	95	149577	50.0	44.0	
67 1,2-Dichloropropane	63	7.952	7.952	0.000	93	97902	50.0	42.3	
70 1,4-Dioxane	88	8.025	8.025	0.000	38	15070	1000.0	944.4	M
68 Dibromomethane	93	8.031	8.031	0.000	94	49728	50.0	42.3	
71 Dichlorobromomethane	83	8.232	8.232	0.000	97	94398	50.0	40.6	
74 cis-1,3-Dichloropropene	75	8.676	8.676	0.000	90	103820	50.0	38.1	
75 4-Methyl-2-pentanone (MIBK)	43	8.822	8.822	0.000	99	163714	100.0	78.6	
76 Toluene	91	9.005	9.005	0.000	98	406178	50.0	48.5	
77 trans-1,3-Dichloropropene	75	9.254	9.254	0.000	98	89501	50.0	41.0	
78 Ethyl methacrylate	69	9.309	9.309	0.000	95	90025	50.0	42.6	
79 1,1,2-Trichloroethane	97	9.449	9.449	0.000	93	74940	50.0	47.0	
80 Tetrachloroethene	164	9.516	9.516	0.000	97	82696	50.0	50.9	
81 1,3-Dichloropropane	76	9.601	9.601	0.000	99	131974	50.0	44.6	
82 2-Hexanone	43	9.656	9.656	0.000	98	106998	100.0	71.1	
84 Chlorodibromomethane	129	9.814	9.814	0.000	90	62228	50.0	45.1	
85 Ethylene Dibromide	107	9.929	9.929	0.000	97	72114	50.0	47.0	
86 3-Chlorobenzotrifluoride	180	10.392	10.392	0.000	87	136798	50.0	50.8	
87 Chlorobenzene	112	10.416	10.416	0.000	95	261424	50.0	48.5	
88 4-Chlorobenzotrifluoride	180	10.477	10.477	0.000	95	129407	50.0	50.9	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.507	0.000	90	83515	50.0	47.5	
90 Ethylbenzene	106	10.513	10.513	0.000	99	138039	50.0	48.3	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	173067	50.0	49.4	
92 o-Xylene	106	11.031	11.031	0.000	96	166140	50.0	49.9	
93 Styrene	104	11.049	11.049	0.000	95	274262	50.0	49.7	
94 Bromoform	173	11.231	11.231	0.000	96	31597	50.0	40.2	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	94	132522	50.0	50.1	
97 Isopropylbenzene	105	11.396	11.396	0.000	96	407898	50.0	50.0	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.706	0.000	94	103762	50.0	48.3	
100 Bromobenzene	156	11.712	11.712	0.000	93	106358	50.0	46.0	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	80	21462	50.0	25.7	
101 1,2,3-Trichloropropane	110	11.761	11.761	0.000	86	35367	50.0	46.4	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	118334	50.0	44.7	
104 2-Chlorotoluene	126	11.900	11.900	0.000	97	106995	50.0	47.5	
105 3-Chlorotoluene	126	11.961	11.961	0.000	95	115440	50.0	49.9	

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	11.998	11.998	0.000	93	362965	50.0	48.5	
107 4-Chlorotoluene	126	12.022	12.022	0.000	98	117949	50.0	47.6	
108 tert-Butylbenzene	119	12.308	12.308	0.000	94	284997	50.0	46.9	
110 1,2,4-Trimethylbenzene	105	12.369	12.369	0.000	97	356320	50.0	47.5	
111 1,2-dichloro-4-(trifluorom	214	12.411	12.411	0.000	97	97635	50.0	46.7	
112 sec-Butylbenzene	105	12.533	12.533	0.000	94	416420	50.0	48.5	
113 1,3-Dichlorobenzene	146	12.649	12.649	0.000	99	209035	50.0	50.8	
114 4-Isopropyltoluene	119	12.691	12.691	0.000	97	360865	50.0	49.7	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	96	216859	50.0	50.6	
116 2,4-Dichloro-1-(trifluorom	214	12.776	12.776	0.000	95	94188	50.0	48.7	
118 2,5-Dichlorobenzotrifluori	214	12.825	12.825	0.000	0	99687	50.0	47.6	
120 n-Butylbenzene	91	13.099	13.099	0.000	98	289878	50.0	46.6	
121 1,2-Dichlorobenzene	146	13.111	13.111	0.000	97	200001	50.0	52.0	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.902	0.000	75	13042	50.0	41.3	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.042	0.000	0	364093	150.0	165.7	
125 2,3- & 3,4- Dichlorotoluen	125	14.462	14.462	0.000	0	228504	100.0	109.0	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	95	80738	50.0	53.9	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	96	40015	50.0	55.5	
128 Naphthalene	128	14.991	14.991	0.000	97	216269	50.0	56.2	
129 1,2,3-Trichlorobenzene	180	15.216	15.216	0.000	94	66382	50.0	54.8	
131 2,4,5-Trichlorotoluene	159	15.995	15.995	0.000	0	25432	50.0	58.2	
130 2,3,6-Trichlorotoluene	159	16.086	16.086	0.000	96	22952	50.0	56.9	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	84.9	
S 133 Xylenes, Total	106				0		100.0	99.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	79.1	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

voaWAcro1stRe_00001	Amount Added: 6.00	Units: uL	
voaWKet1stRes_00001	Amount Added: 2.00	Units: uL	
VOA8260VOAPRI_00145	Amount Added: 2.00	Units: uL	
VOAVAPRI_00007	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00006	Amount Added: 2.00	Units: uL	
VOA8260INT_00042	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00042	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001002.D

Injection Date: 01-Oct-2015 13:46:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

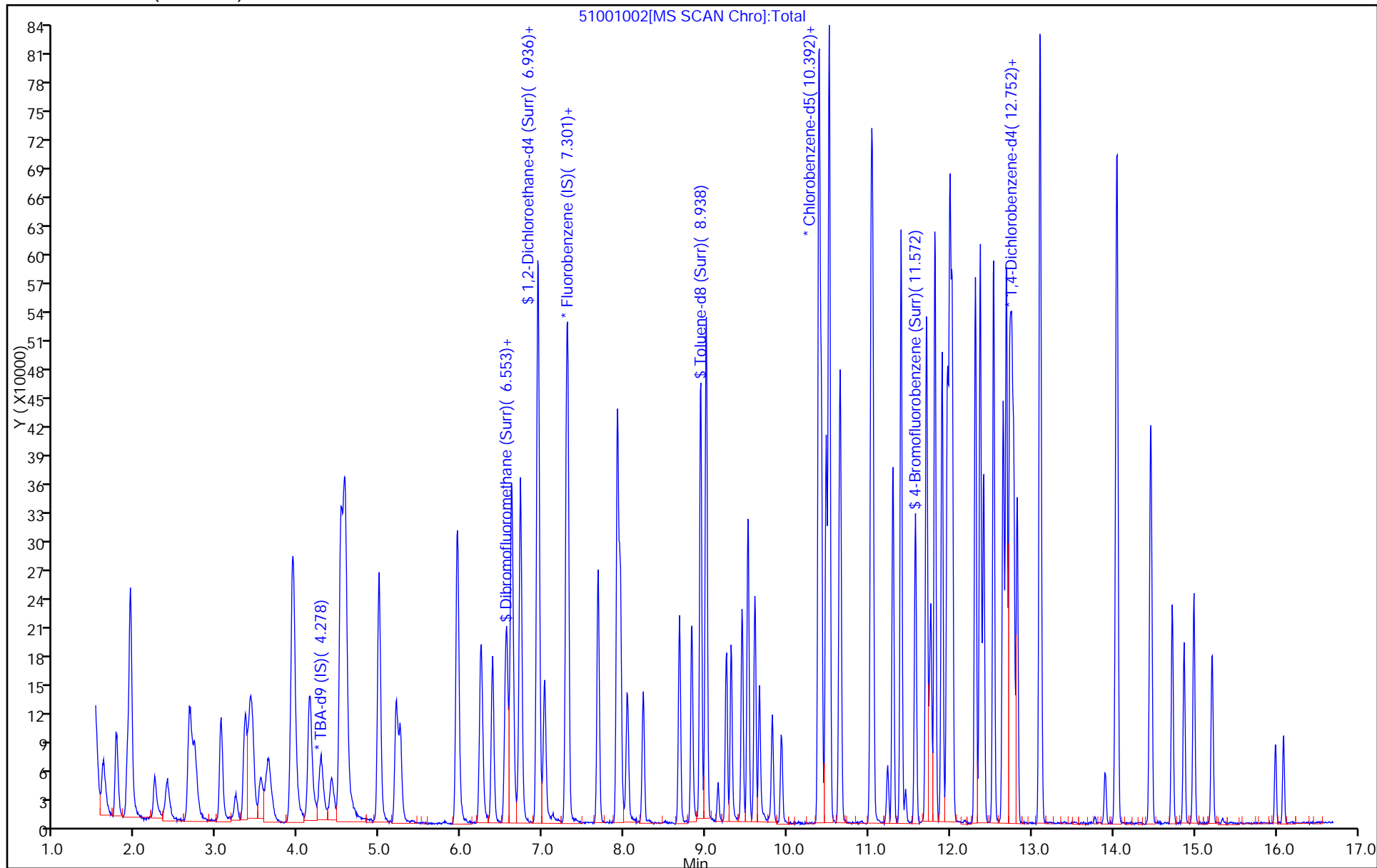
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



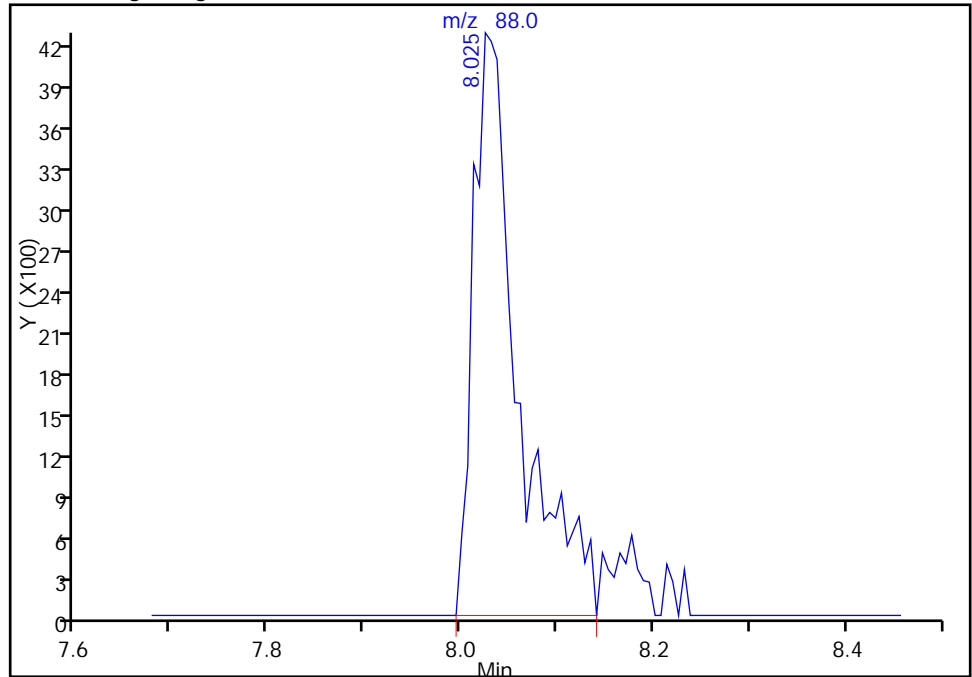
TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001002.D  
Injection Date: 01-Oct-2015 13:46:30 Instrument ID: CHHP5  
Lims ID: CCVIS  
Client ID:  
Operator ID: 001562 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

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

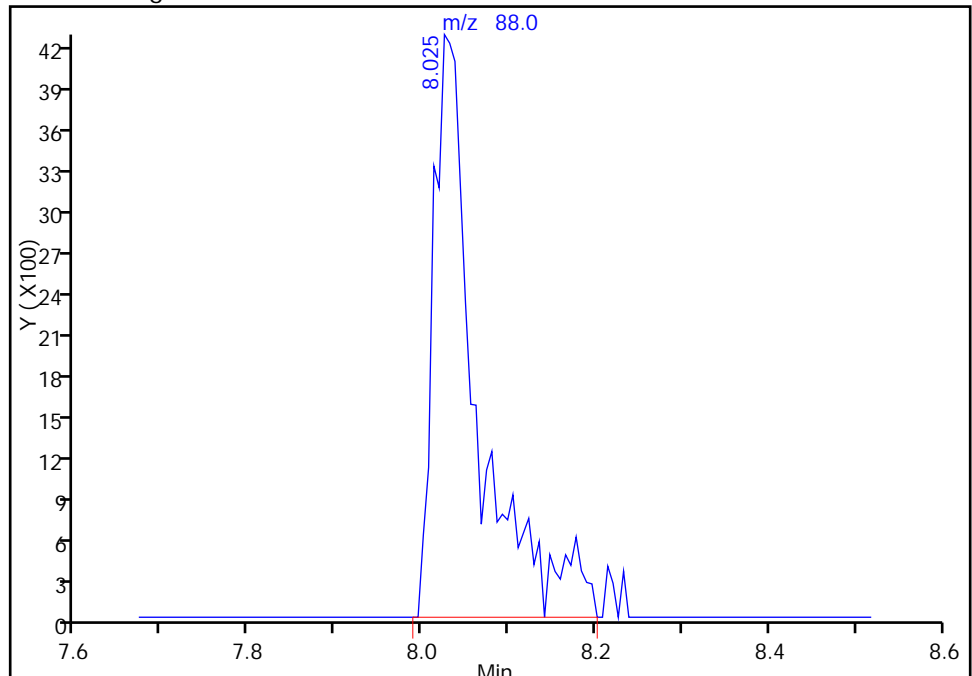
RT: 8.03  
Area: 13857  
Amount: 868.3869  
Amount Units: ng

Processing Integration Results



RT: 8.03  
Area: 15070  
Amount: 944.4028  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 01-Oct-2015 14:01:56  
Audit Action: Manually Integrated  
Audit Reason: Incomplete Integration



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826007.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 26-Aug-2015 14:01:30 ALS Bottle#: 4 Worklist Smp#: 7  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0008300-007  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 27-Aug-2015 11:26:53 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK048

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
\$ 10 BFB	95	8.366	8.366	0.000	0	128431	NR	NR	

**QC Flag Legend**

Processing Flags  
 NR - Missing Quant Standard

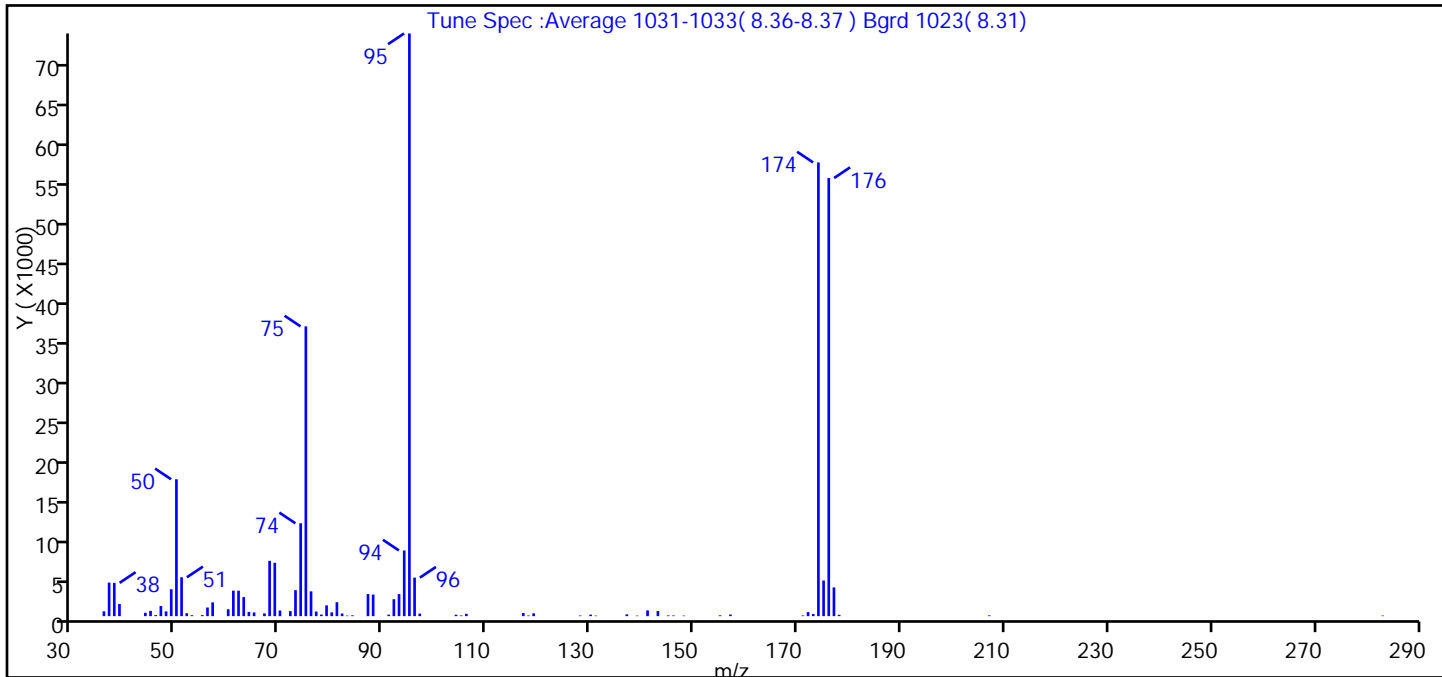
**Reagents:**

VOABFB25\_00065 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826007.D  
 Injection Date: 26-Aug-2015 14:01:30 Instrument ID: CHHP5  
 Lims ID: BFB  
 Client ID:  
 Operator ID: 001562 ALS Bottle#: 4 Worklist Smp#: 7  
 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	23.5
75	30 to 60% of m/z 95	49.7
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	77.9
175	5 to 9% of m/z 174	6.1 (7.9)
176	Greater than 95% but less than 101% of m/z 174	75.2 (96.6)
177	5 to 9% of m/z 176	4.9 (6.6)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826007.D\MSVOA\_LL\_CHHP5.rsl\spectr  
Injection Date: 26-Aug-2015 14:01:30  
Spectrum: Tune Spec :Average 1031-1033( 8.36-8.37 ) Bgrd 1023( 8.31)  
Base Peak: 95.00  
Minimum % Base Peak: 0  
Number of Points: 77

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	611	63.00	2411	87.00	2793	141.00	728
37.00	4245	64.00	518	88.00	2731	143.00	645
38.00	4214	65.00	470	91.00	185	145.00	90
39.00	1541	67.00	350	92.00	2139	146.00	83
44.00	422	68.00	6998	93.00	2793	148.00	69
45.00	664	69.00	6752	94.00	8313	155.00	103
46.00	131	70.00	715	95.00	73720	157.00	200
47.00	1270	72.00	635	96.00	4875	171.00	82
48.00	602	73.00	3289	97.00	325	172.00	516
49.00	3402	74.00	11753	104.00	180	173.00	266
50.00	17320	75.00	36664	105.00	86	174.00	57408
51.00	4919	76.00	3139	106.00	295	175.00	4509
52.00	366	77.00	580	117.00	395	176.00	55432
53.00	119	78.00	199	118.00	78	177.00	3632
55.00	129	79.00	1363	119.00	354	178.00	170
56.00	1095	80.00	480	128.00	80	207.00	97
57.00	1741	81.00	1763	130.00	191	283.00	74
60.00	873	82.00	333	131.00	68		
61.00	3226	83.00	66	137.00	226		
62.00	3220	84.00	102	139.00	67		

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826007.D

Injection Date: 26-Aug-2015 14:01:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: BFB

Worklist Smp#: 7

Client ID:

Injection Vol: 5.0 mL

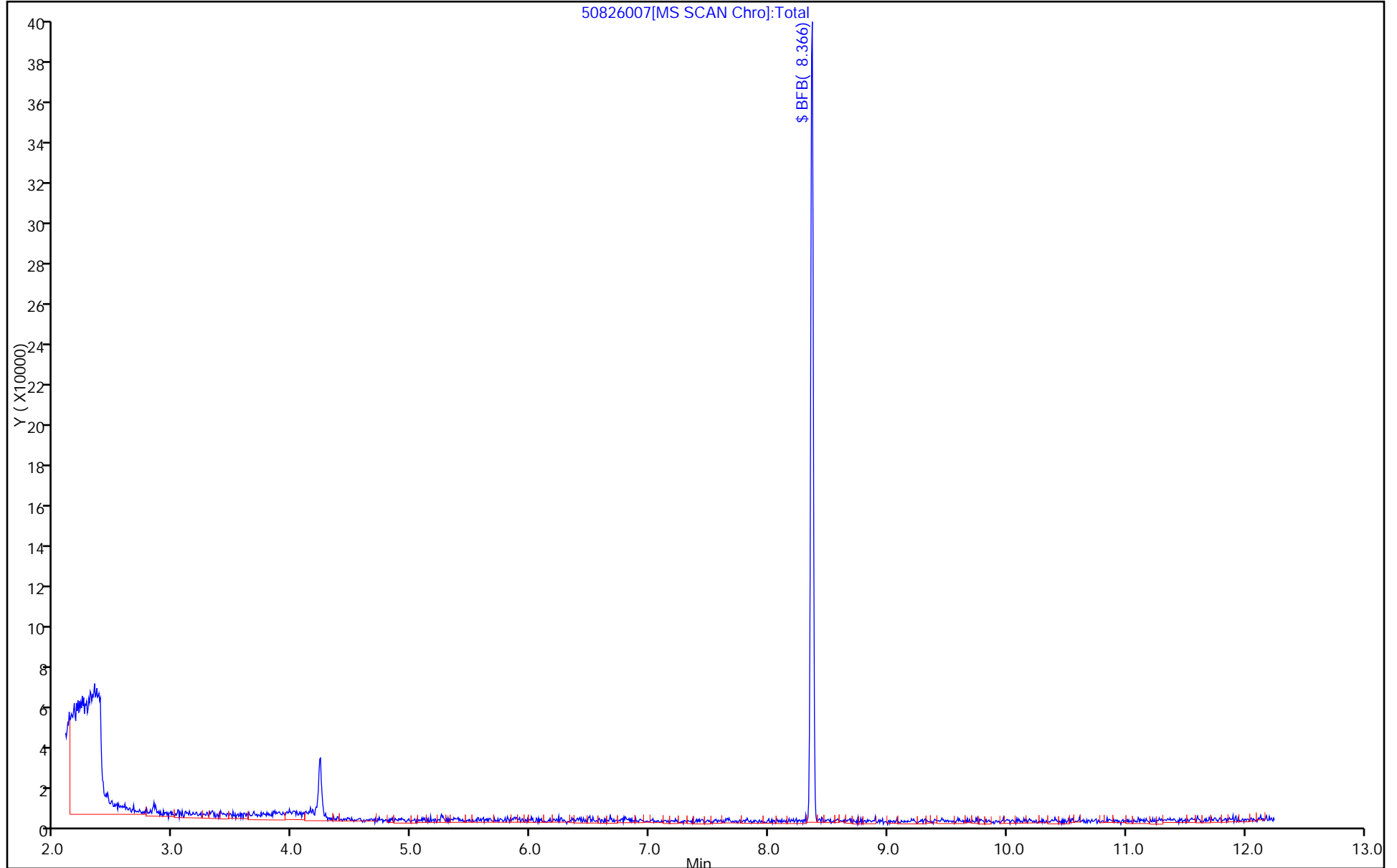
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930001.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 30-Sep-2015 10:35:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0008759-001  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Sep-2015 12:42:37 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK004

First Level Reviewer: fergusond Date: 30-Sep-2015 11:00:38

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	8.369	8.369	0.000	0	45680	NR	NR	
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**QC Flag Legend**

Processing Flags

NR - Missing Quant Standard

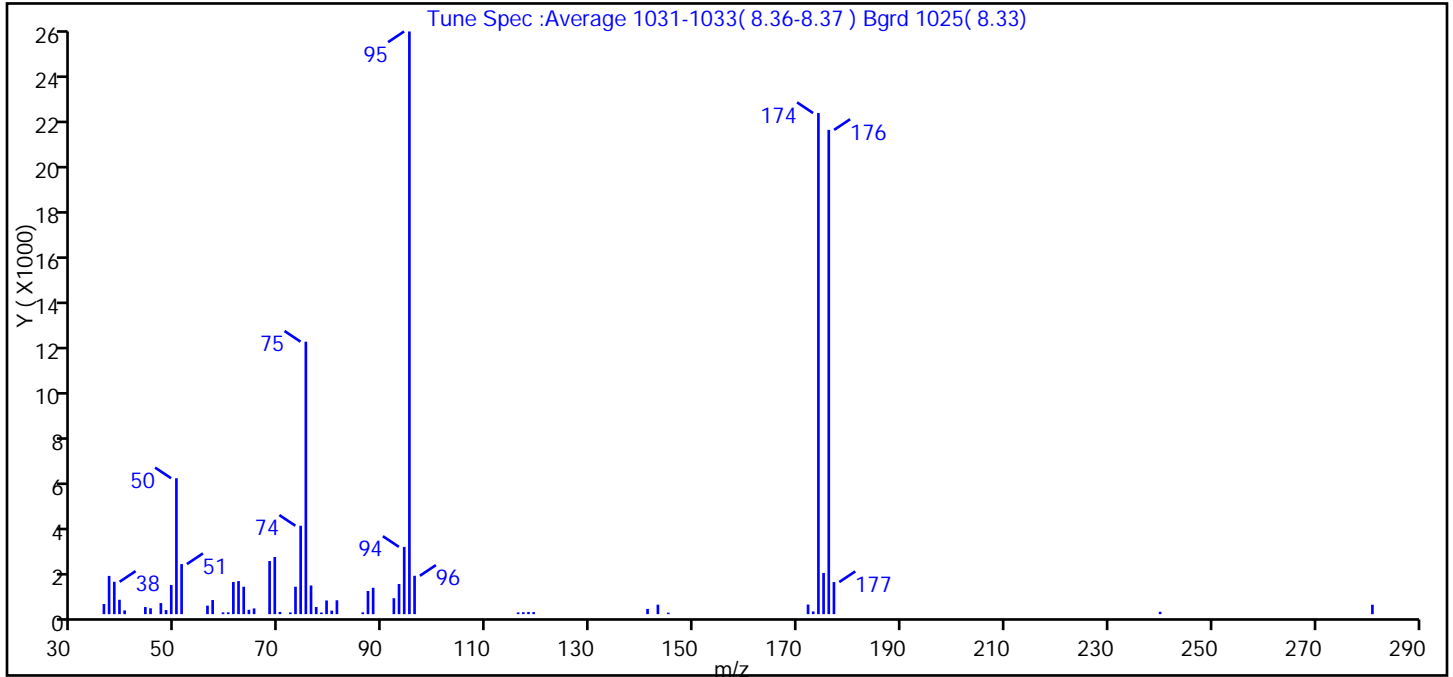
**Reagents:**

VOABFB25\_00067 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930001.D  
 Injection Date: 30-Sep-2015 10:35:30 Instrument ID: CHHP5  
 Lims ID: BFB  
 Client ID:  
 Operator ID: 001562 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	23.3
75	30 to 60% of m/z 95	46.8
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	86.0
175	5 to 9% of m/z 174	7.1 (8.2)
176	Greater than 95% but less than 101% of m/z 174	83.1 (96.6)
177	5 to 9% of m/z 176	5.5 (6.6)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930001.D\MSVOA\_LL\_CHHP5.rsl\spectr  
 Injection Date: 30-Sep-2015 10:35:30  
 Spectrum: Tune Spec :Average 1031-1033( 8.36-8.37 ) Bgrd 1025( 8.33)  
 Base Peak: 95.00  
 Minimum % Base Peak: 0  
 Number of Points: 57

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	452	60.00	80	78.00	73	119.00	92
37.00	1706	61.00	1434	79.00	610	141.00	233
38.00	1444	62.00	1475	80.00	157	143.00	423
39.00	641	63.00	1223	81.00	619	145.00	66
40.00	166	64.00	194	86.00	79	172.00	428
44.00	317	65.00	255	87.00	1033	173.00	120
45.00	261	68.00	2369	88.00	1176	174.00	22360
47.00	494	69.00	2550	92.00	712	175.00	1838
48.00	183	70.00	98	93.00	1344	176.00	21608
49.00	1303	72.00	77	94.00	3002	177.00	1432
50.00	6065	73.00	1223	95.00	26000	240.00	108
51.00	2234	74.00	3945	96.00	1712	281.00	420
56.00	380	75.00	12158	116.00	77		
57.00	629	76.00	1280	117.00	86		
59.00	78	77.00	319	118.00	97		

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930001.D

Injection Date: 30-Sep-2015 10:35:30

Instrument ID: CHHP5

Operator ID: 001562

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\20151001-8778.b\51001006.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 01-Oct-2015 13:11:30 ALS Bottle#: 1 Worklist Smp#: 6  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0008778-006  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 14:56:17 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond Date: 01-Oct-2015 13:35:43

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	8.366	8.366	0.000	0	88906	NR	NR	
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**QC Flag Legend**

Processing Flags

NR - Missing Quant Standard

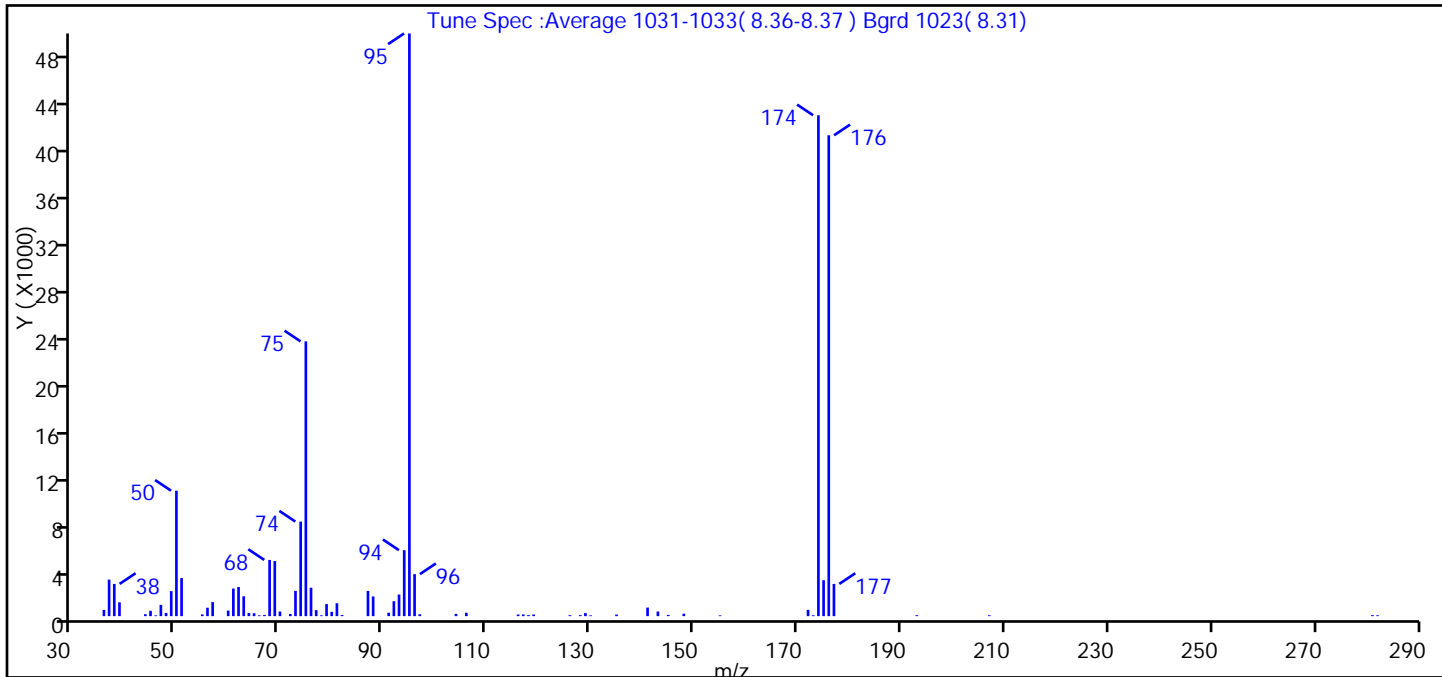
**Reagents:**

VOABFB25\_00067 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001006.D  
 Injection Date: 01-Oct-2015 13:11:30 Instrument ID: CHHP5  
 Lims ID: BFB  
 Client ID:  
 Operator ID: 001562 ALS Bottle#: 1 Worklist Smp#: 6  
 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	21.5
75	30 to 60% of m/z 95	47.2
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	86.0
175	5 to 9% of m/z 174	6.2 (7.2)
176	Greater than 95% but less than 101% of m/z 174	82.5 (96.0)
177	5 to 9% of m/z 176	5.5 (6.7)

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001006.D\MSVOA\_LL\_CHHP5.rsl\spectr  
Injection Date: 01-Oct-2015 13:11:30  
Spectrum: Tune Spec :Average 1031-1033( 8.36-8.37 ) Bgrd 1023( 8.31)  
Base Peak: 95.00  
Minimum % Base Peak: 0  
Number of Points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	530	63.00	1684	82.00	92	129.00	259
37.00	3099	64.00	270	87.00	2139	130.00	67
38.00	2734	65.00	247	88.00	1668	135.00	137
39.00	1172	66.00	70	91.00	288	141.00	727
44.00	165	67.00	104	92.00	1265	143.00	393
45.00	453	68.00	4767	93.00	1832	145.00	104
46.00	67	69.00	4675	94.00	5597	148.00	206
47.00	962	70.00	391	95.00	49416	155.00	68
48.00	272	72.00	183	96.00	3564	172.00	533
49.00	2124	73.00	2143	97.00	162	173.00	76
50.00	10638	74.00	8020	104.00	193	174.00	42480
51.00	3227	75.00	23304	106.00	289	175.00	3045
55.00	145	76.00	2412	116.00	141	176.00	40784
56.00	716	77.00	513	117.00	144	177.00	2733
57.00	1194	78.00	70	118.00	90	193.00	80
60.00	469	79.00	1025	119.00	140	207.00	75
61.00	2338	80.00	363	126.00	82	281.00	87
62.00	2471	81.00	1093	128.00	87	282.00	72

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001006.D

Injection Date: 01-Oct-2015 13:11:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: BFB

Worklist Smp#: 6

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.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-155398/4  
 Matrix: Water Lab File ID: 50930004.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 12:23  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND		5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND		5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-155398/4  
 Matrix: Water Lab File ID: 50930004.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 12:23  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	95		71-118
460-00-4	4-Bromofluorobenzene (Surr)	90		70-118
1868-53-7	Dibromofluoromethane (Surr)	107		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930004.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 30-Sep-2015 12:23:30 ALS Bottle#: 4 Worklist Smp#: 4  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: MB  
 Misc. Info.: 180-0008759-004  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Sep-2015 13:15:56 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK004

First Level Reviewer: fergusond Date: 30-Sep-2015 13:15:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.262	4.273	-0.011	0	119766	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.292	7.290	0.002	98	324230	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.387	0.001	87	80509	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.729	0.001	95	120814	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.568	6.560	0.008	92	85119	50.0	53.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.939	6.932	0.007	0	105080	50.0	48.0	
\$ 7 Toluene-d8 (Surr)	98	8.934	8.933	0.001	95	293806	50.0	47.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.574	11.573	0.001	90	104863	50.0	44.8	
11 Dichlorodifluoromethane	85		1.602					ND	
12 Chloromethane	50		1.773					ND	
13 Vinyl chloride	62		1.907					ND	
14 Butadiene	39		1.943					ND	
15 Bromomethane	94		2.241					ND	
16 Chloroethane	64		2.393					ND	
17 Dichlorofluoromethane	67		2.673					ND	
18 Trichlorofluoromethane	101		2.710					ND	
19 Ethanol	45		2.957					ND	
20 Ethyl ether	59		3.044					ND	
21 Acrolein	56		3.227					ND	
22 1,1-Dichloroethene	96		3.342					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.421					ND	
24 Acetone	43		3.446					ND	
25 Iodomethane	142		3.531					ND	
26 Carbon disulfide	76		3.628					ND	
27 Isopropyl alcohol	45		3.706					ND	
29 Acetonitrile	40		3.870					ND	
28 3-Chloro-1-propene	76		3.914					ND	
30 Methyl acetate	43		3.932					ND	
31 Methylene Chloride	84		4.139					ND	
32 2-Methyl-2-propanol	59		4.413					ND	
33 Acrylonitrile	53		4.522					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		4.565					ND	
35 Methyl tert-butyl ether	73		4.577					ND	
36 Hexane	57		4.985					ND	
37 1,1-Dichloroethane	63		5.198					ND	
38 Vinyl acetate	43		5.253					ND	
39 2-Chloro-1,3-butadiene	53		5.299					ND	
41 Isopropyl ether	45		5.299					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.780					ND	
45 cis-1,2-Dichloroethene	96		5.946					ND	
44 2,2-Dichloropropane	77		5.952					ND	
46 2-Butanone (MEK)	43		5.958					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
48 Ethyl acetate	43		6.036					ND	
47 Propionitrile	54		6.036					ND	
50 Methacrylonitrile	41		6.212					ND	
49 Chlorobromomethane	128		6.232					ND	
51 Tetrahydrofuran	42		6.244					ND	
52 Chloroform	83		6.384					ND	
53 1,1,1-Trichloroethane	97		6.536					ND	
54 Cyclohexane	56		6.615					ND	
56 Carbon tetrachloride	117		6.713					ND	
55 1,1-Dichloropropene	75		6.731					ND	
57 Isobutyl alcohol	41		6.925					ND	
58 Benzene	78		6.944					ND	
59 1,2-Dichloroethane	62		7.023					ND	
61 Tert-amyl methyl ether	73		7.125					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.309					ND	
63 n-Butanol	56		7.629					ND	
64 Trichloroethene	130		7.674					ND	
65 Ethyl acrylate	55		7.800					ND	
66 Methylcyclohexane	83		7.917					ND	
67 1,2-Dichloropropane	63		7.947					ND	
70 1,4-Dioxane	88		8.027					ND	
69 Methyl methacrylate	69		8.031					ND	
68 Dibromomethane	93		8.039					ND	
71 Dichlorobromomethane	83		8.227					ND	
72 2-Nitropropane	41		8.451					ND	
73 2-Chloroethyl vinyl ether	63		8.526					ND	
74 cis-1,3-Dichloropropene	75		8.671					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.830					ND	
76 Toluene	91		9.000					ND	
77 trans-1,3-Dichloropropene	75		9.249					ND	
78 Ethyl methacrylate	69		9.310					ND	
79 1,1,2-Trichloroethane	97		9.450					ND	
80 Tetrachloroethene	164		9.517					ND	
81 1,3-Dichloropropane	76		9.602					ND	
82 2-Hexanone	43		9.657					ND	
83 n-Butyl acetate	43		9.783					ND	
84 Chlorodibromomethane	129		9.815					ND	
85 Ethylene Dibromide	107		9.931					ND	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.387					ND	
87 Chlorobenzene	112		10.417					ND	
88 4-Chlorobenzotrifluoride	180		10.478					ND	
89 1,1,1,2-Tetrachloroethane	131		10.509					ND	
90 Ethylbenzene	106		10.515					ND	
91 m-Xylene & p-Xylene	106		10.649					ND	
92 o-Xylene	106		11.026					ND	
93 Styrene	104		11.044					ND	
94 Bromoform	173		11.233					ND	
95 Cyclohexanol	57		11.245					ND	
96 2-Chlorobenzotrifluoride	180		11.299					ND	
97 Isopropylbenzene	105		11.397					ND	
98 Cyclohexanone	55		11.480					ND	
99 1,1,2,2-Tetrachloroethane	83		11.707					ND	
100 Bromobenzene	156		11.707					ND	
102 trans-1,4-Dichloro-2-buten	53		11.744					ND	
101 1,2,3-Trichloropropane	110		11.768					ND	
103 N-Propylbenzene	120		11.810					ND	
104 2-Chlorotoluene	126		11.902					ND	
105 3-Chlorotoluene	126		11.963					ND	
106 1,3,5-Trimethylbenzene	105		11.993					ND	
107 4-Chlorotoluene	126		12.023					ND	
108 tert-Butylbenzene	119		12.309					ND	
109 Pentachloroethane	167		12.338					ND	
110 1,2,4-Trimethylbenzene	105		12.370					ND	
111 1,2-dichloro-4-(trifluorom	214		12.407					ND	
112 sec-Butylbenzene	105		12.528					ND	
113 1,3-Dichlorobenzene	146		12.650					ND	
114 4-Isopropyltoluene	119		12.686					ND	
115 1,4-Dichlorobenzene	146		12.753					ND	
117 1,2,3-Trimethylbenzene	105		12.776					ND	
116 2,4-Dichloro-1-(triflourom	214		12.778					ND	
118 2,5-Dichlorobenzotrifluori	214		12.820					ND	
119 Benzyl chloride	91		12.867					ND	
120 n-Butylbenzene	91		13.094					ND	
121 1,2-Dichlorobenzene	146		13.106					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.903					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.043					ND	
124 1,3,5-Trichlorobenzene	180		14.087					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.463					ND	
126 1,2,4-Trichlorobenzene	180		14.724					ND	
127 Hexachlorobutadiene	225		14.870					ND	
128 Naphthalene	128	14.987	14.986	0.001	89	2139		0.6198	
129 1,2,3-Trichlorobenzene	180		15.217					ND	
131 2,4,5-Trichlorotoluene	159		15.990					ND	
130 2,3,6-Trichlorotoluene	159		16.093					ND	
132 2-Methylnaphthalene	142		16.134					ND	
151 Isooctane	57		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
152 Formaldehyde TIC	1		0.000						ND
150 2,6-Dichlorotoluene	1		0.000						ND
S 133 Xylenes, Total	106		1.000						ND
S 134 1,2-Dichloroethene, Total	96		1.000						ND
S 135 1,3-Dichloropropene, Total	1		0.000						ND
T 136 Mesityl oxide TIC	83		0.000						ND
T 138 Methyl n-amyl ketone TIC	43		0.000						ND
T 137 Tetrahydrofuran TIC	42		6.253						ND
T 153 1,2 Epoxybutane TIC	42		6.253						ND

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930004.D

Injection Date: 30-Sep-2015 12:23:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

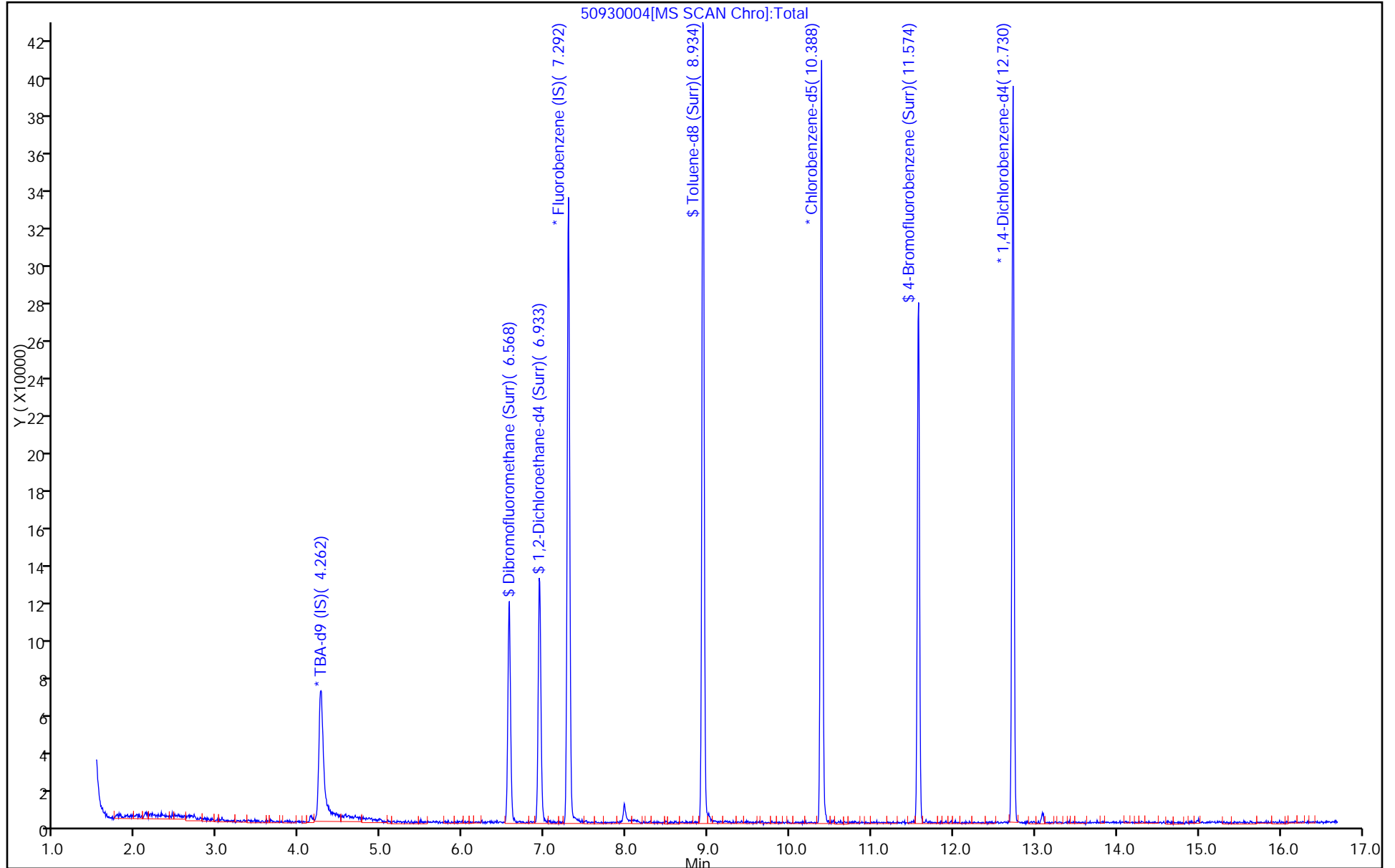
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-155577/7  
 Matrix: Water Lab File ID: 51001007.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 14:45  
 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.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.28
75-01-4	Vinyl chloride	ND		1.0	0.23
74-83-9	Bromomethane	ND		1.0	0.31
75-00-3	Chloroethane	ND		1.0	0.21
75-35-4	1,1-Dichloroethene	ND		1.0	0.30
67-64-1	Acetone	ND		5.0	2.5
75-15-0	Carbon disulfide	ND		1.0	0.21
75-09-2	Methylene Chloride	ND		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.17
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.18
75-34-3	1,1-Dichloroethane	ND		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.24
74-97-5	Bromochloromethane	ND		1.0	0.18
78-93-3	2-Butanone (MEK)	ND		5.0	0.55
67-66-3	Chloroform	ND		1.0	0.17
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.29
56-23-5	Carbon tetrachloride	ND		1.0	0.14
71-43-2	Benzene	ND		1.0	0.11
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
79-01-6	Trichloroethene	ND		1.0	0.14
78-87-5	1,2-Dichloropropane	ND		1.0	0.095
75-27-4	Bromodichloromethane	ND		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.53
108-88-3	Toluene	ND		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.20
127-18-4	Tetrachloroethene	ND		1.0	0.15
591-78-6	2-Hexanone	ND		5.0	0.16
124-48-1	Dibromochloromethane	ND		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.18
108-90-7	Chlorobenzene	ND		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.28
100-41-4	Ethylbenzene	ND		1.0	0.23
1330-20-7	Xylenes, Total	ND		3.0	0.49
100-42-5	Styrene	ND		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-155577/7  
 Matrix: Water Lab File ID: 51001007.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 14:45  
 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.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.20
107-13-1	Acrylonitrile	ND		20	0.55
123-91-1	1,4-Dioxane	ND		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	95		71-118
460-00-4	4-Bromofluorobenzene (Surr)	88		70-118
1868-53-7	Dibromofluoromethane (Surr)	99		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001007.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 01-Oct-2015 14:45:30 ALS Bottle#: 4 Worklist Smp#: 7  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: MB  
 Misc. Info.: 180-0008778-007  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 02-Oct-2015 08:12:07 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 02-Oct-2015 08:12:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.267	4.278	-0.011	0	120179	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.291	7.289	0.002	98	325318	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.386	0.001	87	84064	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.729	12.728	0.001	96	117882	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.567	6.559	0.008	94	79079	50.0	49.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.938	6.936	0.002	0	106725	50.0	48.6	
\$ 7 Toluene-d8 (Surr)	98	8.939	8.938	0.001	94	307008	50.0	47.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.574	11.572	0.002	89	107190	50.0	43.8	
11 Dichlorodifluoromethane	85		1.613					ND	
12 Chloromethane	50		1.759					ND	
13 Vinyl chloride	62		1.905					ND	
14 Butadiene	39		1.936					ND	
15 Bromomethane	94		2.234					ND	
16 Chloroethane	64		2.386					ND	
17 Dichlorofluoromethane	67		2.666					ND	
18 Trichlorofluoromethane	101		2.702					ND	
19 Ethanol	45		2.957					ND	
20 Ethyl ether	59		3.049					ND	
21 Acrolein	56		3.232					ND	
22 1,1-Dichloroethene	96		3.347					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.414					ND	
24 Acetone	43		3.438					ND	
25 Iodomethane	142		3.542					ND	
26 Carbon disulfide	76		3.633					ND	
27 Isopropyl alcohol	45		3.706					ND	
29 Acetonitrile	40		3.870					ND	
28 3-Chloro-1-propene	76		3.925					ND	
30 Methyl acetate	43		3.937					ND	
31 Methylene Chloride	84	4.158	4.138	0.020	20	1843		-5.23	
32 2-Methyl-2-propanol	59		4.406					ND	
33 Acrylonitrile	53		4.521					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		4.564					ND	
35 Methyl tert-butyl ether	73		4.576					ND	
36 Hexane	57		4.990					ND	
37 1,1-Dichloroethane	63		5.196					ND	
38 Vinyl acetate	43		5.245					ND	
39 2-Chloro-1,3-butadiene	53		5.299					ND	
41 Isopropyl ether	45		5.299					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.780					ND	
44 2,2-Dichloropropane	77		5.945					ND	
45 cis-1,2-Dichloroethene	96		5.951					ND	
46 2-Butanone (MEK)	43		5.957					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
48 Ethyl acetate	43		6.036					ND	
47 Propionitrile	54		6.036					ND	
50 Methacrylonitrile	41		6.212					ND	
49 Chlorobromomethane	128		6.231					ND	
51 Tetrahydrofuran	42		6.249					ND	
52 Chloroform	83		6.383					ND	
53 1,1,1-Trichloroethane	97		6.541					ND	
54 Cyclohexane	56		6.614					ND	
56 Carbon tetrachloride	117		6.711					ND	
55 1,1-Dichloropropene	75		6.730					ND	
57 Isobutyl alcohol	41		6.924					ND	
58 Benzene	78		6.942					ND	
59 1,2-Dichloroethane	62		7.022					ND	
61 Tert-amyl methyl ether	73		7.125					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.307					ND	
63 n-Butanol	56		7.629					ND	
64 Trichloroethene	130		7.679					ND	
65 Ethyl acrylate	55		7.800					ND	
66 Methylcyclohexane	83		7.916					ND	
67 1,2-Dichloropropane	63		7.952					ND	
70 1,4-Dioxane	88		8.025					ND	
69 Methyl methacrylate	69		8.031					ND	
68 Dibromomethane	93		8.031					ND	
71 Dichlorobromomethane	83		8.232					ND	
72 2-Nitropropane	41		8.451					ND	
73 2-Chloroethyl vinyl ether	63		8.526					ND	
74 cis-1,3-Dichloropropene	75		8.676					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822					ND	
76 Toluene	91		9.005					ND	
77 trans-1,3-Dichloropropene	75		9.254					ND	
78 Ethyl methacrylate	69		9.309					ND	
79 1,1,2-Trichloroethane	97		9.449					ND	
80 Tetrachloroethene	164		9.516					ND	
81 1,3-Dichloropropane	76		9.601					ND	
82 2-Hexanone	43		9.656					ND	
83 n-Butyl acetate	43		9.783					ND	
84 Chlorodibromomethane	129		9.814					ND	
85 Ethylene Dibromide	107		9.929					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.392					ND	
87 Chlorobenzene	112		10.416					ND	
88 4-Chlorobenzotrifluoride	180		10.477					ND	
89 1,1,1,2-Tetrachloroethane	131		10.507					ND	
90 Ethylbenzene	106		10.513					ND	
91 m-Xylene & p-Xylene	106		10.647					ND	
92 o-Xylene	106		11.031					ND	
93 Styrene	104		11.049					ND	
94 Bromoform	173		11.231					ND	
95 Cyclohexanol	57		11.245					ND	
96 2-Chlorobenzotrifluoride	180		11.298					ND	
97 Isopropylbenzene	105		11.396					ND	
98 Cyclohexanone	55		11.480					ND	
99 1,1,2,2-Tetrachloroethane	83		11.706					ND	
100 Bromobenzene	156		11.712					ND	
102 trans-1,4-Dichloro-2-buten	53		11.742					ND	
101 1,2,3-Trichloropropane	110		11.761					ND	
103 N-Propylbenzene	120		11.809					ND	
104 2-Chlorotoluene	126		11.900					ND	
105 3-Chlorotoluene	126		11.961					ND	
106 1,3,5-Trimethylbenzene	105		11.998					ND	
107 4-Chlorotoluene	126		12.022					ND	
108 tert-Butylbenzene	119		12.308					ND	
109 Pentachloroethane	167		12.338					ND	
110 1,2,4-Trimethylbenzene	105		12.369					ND	
111 1,2-dichloro-4-(trifluorom	214		12.411					ND	
112 sec-Butylbenzene	105		12.533					ND	
113 1,3-Dichlorobenzene	146		12.649					ND	
114 4-Isopropyltoluene	119		12.691					ND	
115 1,4-Dichlorobenzene	146		12.752					ND	
117 1,2,3-Trimethylbenzene	105		12.776					ND	
116 2,4-Dichloro-1-(triflourom	214		12.776					ND	
118 2,5-Dichlorobenzotrifluori	214		12.825					ND	
119 Benzyl chloride	91		12.867					ND	
120 n-Butylbenzene	91		13.099					ND	
121 1,2-Dichlorobenzene	146		13.111					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.902					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.042					ND	
124 1,3,5-Trichlorobenzene	180		14.087					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.462					ND	
126 1,2,4-Trichlorobenzene	180		14.723					ND	
127 Hexachlorobutadiene	225		14.869					ND	
128 Naphthalene	128		14.991					ND	
129 1,2,3-Trichlorobenzene	180		15.216					ND	
131 2,4,5-Trichlorotoluene	159		15.995					ND	
130 2,3,6-Trichlorotoluene	159		16.086					ND	
132 2-Methylnaphthalene	142		16.134					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
150 2,6-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
146 2,5-Dichlorotoluene	1		0.000						ND
151 Isooctane	57		0.000						ND
S 133 Xylenes, Total	106		1.000						ND
S 134 1,2-Dichloroethene, Total	96		1.000						ND
S 135 1,3-Dichloropropene, Total	1		0.000						ND
T 136 Mesityl oxide TIC	83		0.000						ND
T 138 Methyl n-amyl ketone TIC	43		0.000						ND
T 137 Tetrahydrofuran TIC	42		6.253						ND
T 153 1,2 Epoxybutane TIC	42		6.253						ND

**Reagents:**

VOA8260INT\_00042

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00042

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001007.D

Injection Date: 01-Oct-2015 14:45:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: MB

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

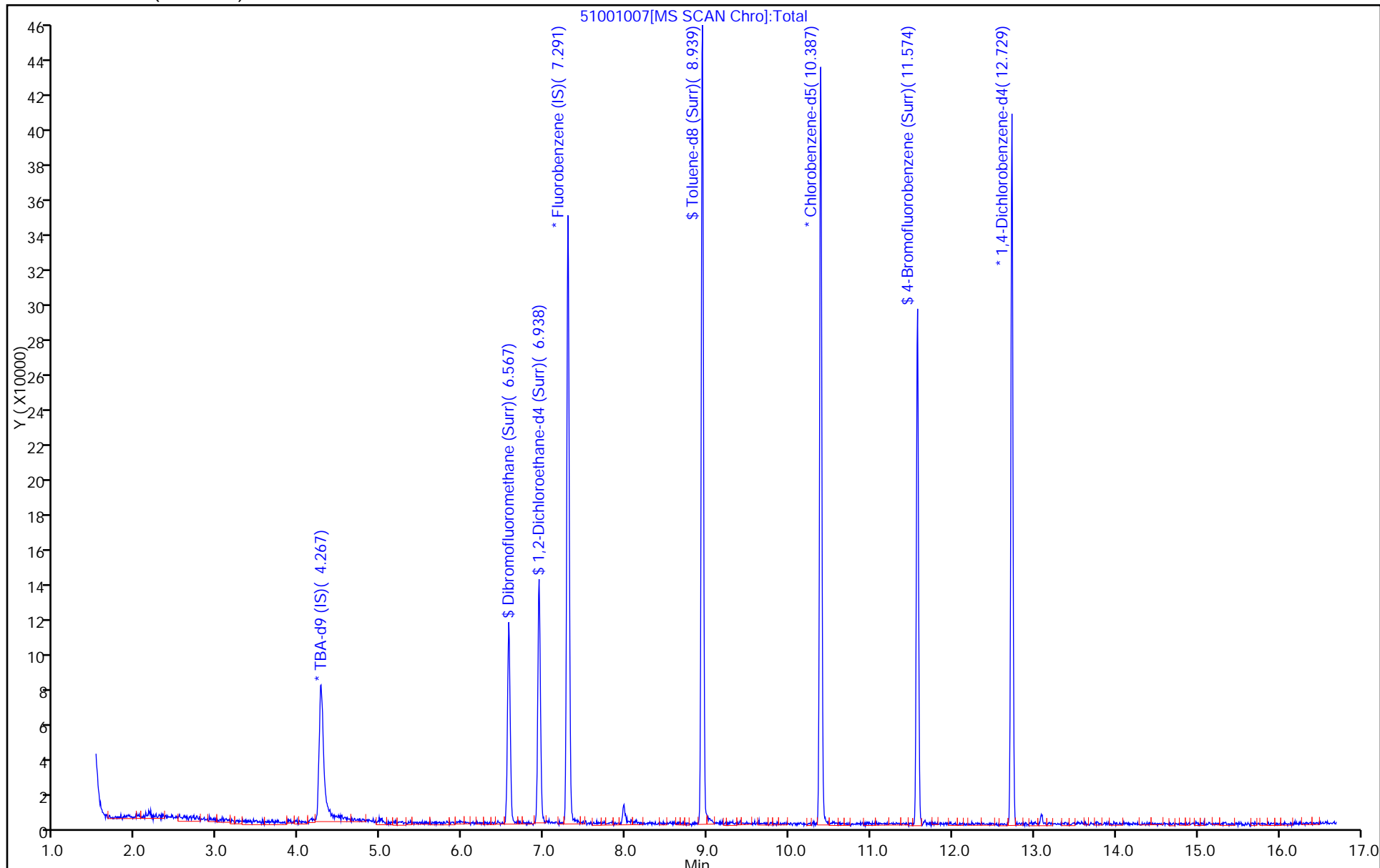
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-155398/10  
 Matrix: Water Lab File ID: 50930010.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 15:03  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	10.7		1.0	0.28
75-01-4	Vinyl chloride	10.2		1.0	0.23
74-83-9	Bromomethane	11.5		1.0	0.31
75-00-3	Chloroethane	9.51		1.0	0.21
75-35-4	1,1-Dichloroethene	9.59		1.0	0.30
67-64-1	Acetone	18.2		5.0	2.5
75-15-0	Carbon disulfide	9.79		1.0	0.21
75-09-2	Methylene Chloride	9.44		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	9.45		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.50		1.0	0.18
75-34-3	1,1-Dichloroethane	9.38		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.34		1.0	0.24
74-97-5	Bromochloromethane	10.4		1.0	0.18
78-93-3	2-Butanone (MEK)	19.1		5.0	0.55
67-66-3	Chloroform	9.14		1.0	0.17
71-55-6	1,1,1-Trichloroethane	9.41		1.0	0.29
56-23-5	Carbon tetrachloride	9.69		1.0	0.14
71-43-2	Benzene	9.48		1.0	0.11
107-06-2	1,2-Dichloroethane	8.81		1.0	0.21
79-01-6	Trichloroethene	10.2		1.0	0.14
78-87-5	1,2-Dichloropropane	9.37		1.0	0.095
75-27-4	Bromodichloromethane	9.52		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	8.85		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.9		5.0	0.53
108-88-3	Toluene	10.4		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.72		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.1		1.0	0.20
127-18-4	Tetrachloroethene	11.4		1.0	0.15
591-78-6	2-Hexanone	17.7		5.0	0.16
124-48-1	Dibromochloromethane	10.2		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.4		1.0	0.18
108-90-7	Chlorobenzene	10.6		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.5		1.0	0.28
100-41-4	Ethylbenzene	10.8		1.0	0.23
1330-20-7	Xylenes, Total	22.1		3.0	0.49
100-42-5	Styrene	11.2		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-155398/10  
 Matrix: Water Lab File ID: 50930010.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 09/30/2015 15:03  
 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.: 155398 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.76		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.4		1.0	0.20
107-13-1	Acrylonitrile	96.8		20	0.55
123-91-1	1,4-Dioxane	204		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	98		70-118
1868-53-7	Dibromofluoromethane (Surr)	92		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930010.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 30-Sep-2015 15:03:30 ALS Bottle#: 10 Worklist Smp#: 10  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: LCS  
 Misc. Info.: 180-0008759-010  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Sep-2015 15:21:07 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK004

First Level Reviewer: fergusond

Date: 30-Sep-2015 15:21:07

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.280	4.273	0.007	0	112117	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.285	7.290	-0.005	98	351860	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.388	10.387	0.001	87	83209	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.730	12.729	0.001	95	130371	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.561	6.560	0.001	94	79482	50.0	46.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.932	6.932	0.000	0	103096	50.0	43.4	
\$ 7 Toluene-d8 (Surr)	98	8.934	8.933	0.001	94	319370	50.0	49.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.574	11.573	0.001	90	119104	50.0	49.2	
11 Dichlorodifluoromethane	85	1.609	1.602	0.007	99	108274	50.0	54.5	
12 Chloromethane	50	1.773	1.773	0.000	99	156433	50.0	53.6	
13 Vinyl chloride	62	1.907	1.907	0.000	97	131979	50.0	51.0	
14 Butadiene	39	1.944	1.943	0.001	96	191043	50.0	62.5	
15 Bromomethane	94	2.272	2.241	0.031	90	60715	50.0	57.6	
16 Chloroethane	64	2.412	2.393	0.019	98	74302	50.0	47.6	
17 Dichlorofluoromethane	67	2.680	2.673	0.007	98	163628	50.0	49.4	
18 Trichlorofluoromethane	101	2.704	2.710	-0.006	98	130321	50.0	52.6	
20 Ethyl ether	59	3.051	3.044	0.007	97	104678	50.0	45.6	
21 Acrolein	56	3.227	3.227	0.000	99	45151	150.0	131.9	
22 1,1-Dichloroethene	96	3.355	3.342	0.013	95	93977	50.0	48.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.434	3.421	0.013	89	98139	50.0	47.3	
24 Acetone	43	3.446	3.446	0.000	88	64546	100.0	90.9	
25 Iodomethane	142	3.544	3.531	0.013	97	150217	50.0	51.4	
26 Carbon disulfide	76	3.635	3.628	0.007	100	222716	50.0	48.9	
28 3-Chloro-1-propene	76	3.927	3.914	0.013	88	48318	50.0	43.5	
30 Methyl acetate	43	3.945	3.932	0.013	99	522379	250.0	246.2	
31 Methylene Chloride	84	4.140	4.139	0.001	97	109329	50.0	47.2	
32 2-Methyl-2-propanol	59	4.414	4.413	0.001	90	66081	500.0	523.7	
33 Acrylonitrile	53	4.523	4.522	0.001	98	498088	500.0	483.9	
34 trans-1,2-Dichloroethene	96	4.572	4.565	0.007	97	100521	50.0	47.2	
35 Methyl tert-butyl ether	73	4.578	4.577	0.001	95	233968	50.0	47.5	
36 Hexane	57	4.992	4.985	0.007	95	168398	50.0	47.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.205	5.198	0.007	96	196558	50.0	46.9	
38 Vinyl acetate	43	5.253	5.253	0.001	97	226124	50.0	71.9	
45 cis-1,2-Dichloroethene	96	5.947	5.946	0.001	83	106168	50.0	46.7	
44 2,2-Dichloropropane	77	5.947	5.952	-0.005	58	72762	50.0	43.3	
46 2-Butanone (MEK)	43	5.959	5.958	0.001	66	101615	100.0	95.3	
49 Chlorobromomethane	128	6.239	6.232	0.007	94	51871	50.0	52.0	
51 Tetrahydrofuran	42	6.257	6.244	0.013	94	84475	100.0	98.7	
52 Chloroform	83	6.385	6.384	0.001	95	165419	50.0	45.7	
53 1,1,1-Trichloroethane	97	6.543	6.536	0.007	96	126033	50.0	47.1	
54 Cyclohexane	56	6.622	6.615	0.007	97	212298	50.0	47.4	
56 Carbon tetrachloride	117	6.713	6.713	0.000	97	110435	50.0	48.4	
55 1,1-Dichloropropene	75	6.725	6.731	-0.006	89	137338	50.0	46.4	
57 Isobutyl alcohol	41	6.932	6.925	0.007	93	82660	1250.0	1233.6	
58 Benzene	78	6.944	6.944	0.000	98	411059	50.0	47.4	
59 1,2-Dichloroethane	62	7.023	7.023	0.000	96	132236	50.0	44.1	
62 n-Heptane	43	7.309	7.309	0.000	96	162038	50.0	49.9	
64 Trichloroethene	130	7.674	7.674	0.000	97	107741	50.0	50.8	
66 Methylcyclohexane	83	7.912	7.917	-0.005	95	162526	50.0	48.6	
67 1,2-Dichloropropane	63	7.948	7.947	0.001	96	106624	50.0	46.8	
70 1,4-Dioxane	88	8.027	8.027	0.000	36	16045	1000.0	1022.3	
68 Dibromomethane	93	8.039	8.039	0.000	94	52115	50.0	45.1	
71 Dichlorobromomethane	83	8.234	8.227	0.007	98	108816	50.0	47.6	
74 cis-1,3-Dichloropropene	75	8.672	8.671	0.001	90	118542	50.0	44.2	
75 4-Methyl-2-pentanone (MIBK)	43	8.824	8.830	-0.006	99	183528	100.0	89.5	
76 Toluene	91	9.007	9.000	0.007	98	429061	50.0	52.1	
77 trans-1,3-Dichloropropene	75	9.250	9.249	0.001	98	104429	50.0	48.6	
78 Ethyl methacrylate	69	9.311	9.310	0.001	94	103500	50.0	49.8	
79 1,1,2-Trichloroethane	97	9.445	9.450	-0.005	93	79428	50.0	50.7	
80 Tetrachloroethene	164	9.518	9.517	0.001	96	91123	50.0	57.0	
81 1,3-Dichloropropane	76	9.603	9.602	0.001	98	145291	50.0	49.9	
82 2-Hexanone	43	9.658	9.657	0.001	97	130628	100.0	88.3	
84 Chlorodibromomethane	129	9.816	9.815	0.001	91	69476	50.0	51.2	
85 Ethylene Dibromide	107	9.931	9.931	0.000	98	78853	50.0	52.2	
86 3-Chlorobenzotrifluoride	180	10.388	10.387	0.001	84	140837	50.0	53.2	
87 Chlorobenzene	112	10.412	10.417	-0.005	94	281193	50.0	53.0	
88 4-Chlorobenzotrifluoride	180	10.473	10.478	-0.005	95	133028	50.0	53.2	
89 1,1,1,2-Tetrachloroethane	131	10.509	10.509	0.000	91	91059	50.0	52.7	
90 Ethylbenzene	106	10.515	10.515	0.000	98	151638	50.0	53.9	
91 m-Xylene & p-Xylene	106	10.643	10.649	-0.006	0	190826	50.0	55.3	
92 o-Xylene	106	11.026	11.026	0.000	97	179519	50.0	54.8	
93 Styrene	104	11.045	11.044	0.001	95	304981	50.0	56.2	
94 Bromoform	173	11.227	11.233	-0.006	95	37766	50.0	48.8	
96 2-Chlorobenzotrifluoride	180	11.294	11.299	-0.005	98	141095	50.0	54.2	
97 Isopropylbenzene	105	11.397	11.397	0.000	96	446188	50.0	55.6	
99 1,1,2,2-Tetrachloroethane	83	11.708	11.707	0.001	79	110323	50.0	52.2	
100 Bromobenzene	156	11.708	11.707	0.001	94	112980	50.0	50.5	
102 trans-1,4-Dichloro-2-buten	53	11.744	11.744	0.000	39	5806	50.0	7.18	
101 1,2,3-Trichloropropane	110	11.763	11.768	-0.006	86	36732	50.0	49.8	
103 N-Propylbenzene	120	11.811	11.810	0.001	99	127406	50.0	49.7	
104 2-Chlorotoluene	126	11.896	11.902	-0.006	96	116053	50.0	53.3	
105 3-Chlorotoluene	126	11.963	11.963	0.000	95	114555	50.0	51.2	
106 1,3,5-Trimethylbenzene	105	11.994	11.993	0.001	95	376562	50.0	52.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	12.018	12.023	-0.005	98	122248	50.0	51.0	
108 tert-Butylbenzene	119	12.310	12.309	0.001	95	303708	50.0	51.6	
110 1,2,4-Trimethylbenzene	105	12.365	12.370	-0.005	97	382623	50.0	52.8	
111 1,2-dichloro-4-(trifluorom	214	12.407	12.407	0.000	97	96581	50.0	47.8	
112 sec-Butylbenzene	105	12.529	12.528	0.001	94	438444	50.0	52.8	
113 1,3-Dichlorobenzene	146	12.651	12.650	0.001	99	215147	50.0	54.0	
114 4-Isopropyltoluene	119	12.687	12.686	0.001	97	374296	50.0	53.2	
115 1,4-Dichlorobenzene	146	12.754	12.753	0.001	96	222697	50.0	53.7	
116 2,4-Dichloro-1-(trifluorom	214	12.778	12.778	0.000	96	86242	50.0	46.0	
118 2,5-Dichlorobenzotrifluori	214	12.821	12.820	0.001	0	102037	50.0	50.4	
120 n-Butylbenzene	91	13.095	13.094	0.001	98	298821	50.0	49.7	
121 1,2-Dichlorobenzene	146	13.107	13.106	0.001	97	201586	50.0	54.1	
122 1,2-Dibromo-3-Chloropropan	75	13.904	13.903	0.001	81	14486	50.0	47.4	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.044	14.043	0.001	0	345065	150.0	162.2	
125 2,3- & 3,4- Dichlorotoluen	125	14.457	14.463	-0.006	0	221300	100.0	109.1	
126 1,2,4-Trichlorobenzene	180	14.725	14.724	0.001	95	80309	50.0	55.4	
127 Hexachlorobutadiene	225	14.865	14.870	-0.005	96	36976	50.0	53.0	
128 Naphthalene	128	14.987	14.986	0.001	97	217583	50.0	58.4	
129 1,2,3-Trichlorobenzene	180	15.212	15.217	-0.005	96	63455	50.0	54.1	
131 2,4,5-Trichlorotoluene	159	15.991	15.990	0.000	0	20848	50.0	49.3	
130 2,3,6-Trichlorotoluene	159	16.088	16.093	-0.005	97	22389	50.0	57.4	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	93.9	
S 133 Xylenes, Total	106				0		100.0	110.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	92.8	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWVA2nd Res_00010	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00144	Amount Added: 2.00	Units: uL	
voaWKetmix2nd_00002	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00006	Amount Added: 2.00	Units: uL	
voaWAcro1stRe_00001	Amount Added: 6.00	Units: uL	
VOA8260INT_00042	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00042	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150930-8759.b\50930010.D

Injection Date: 30-Sep-2015 15:03:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: LCS

Worklist Smp#: 10

Client ID:

Purge Vol: 5.000 mL

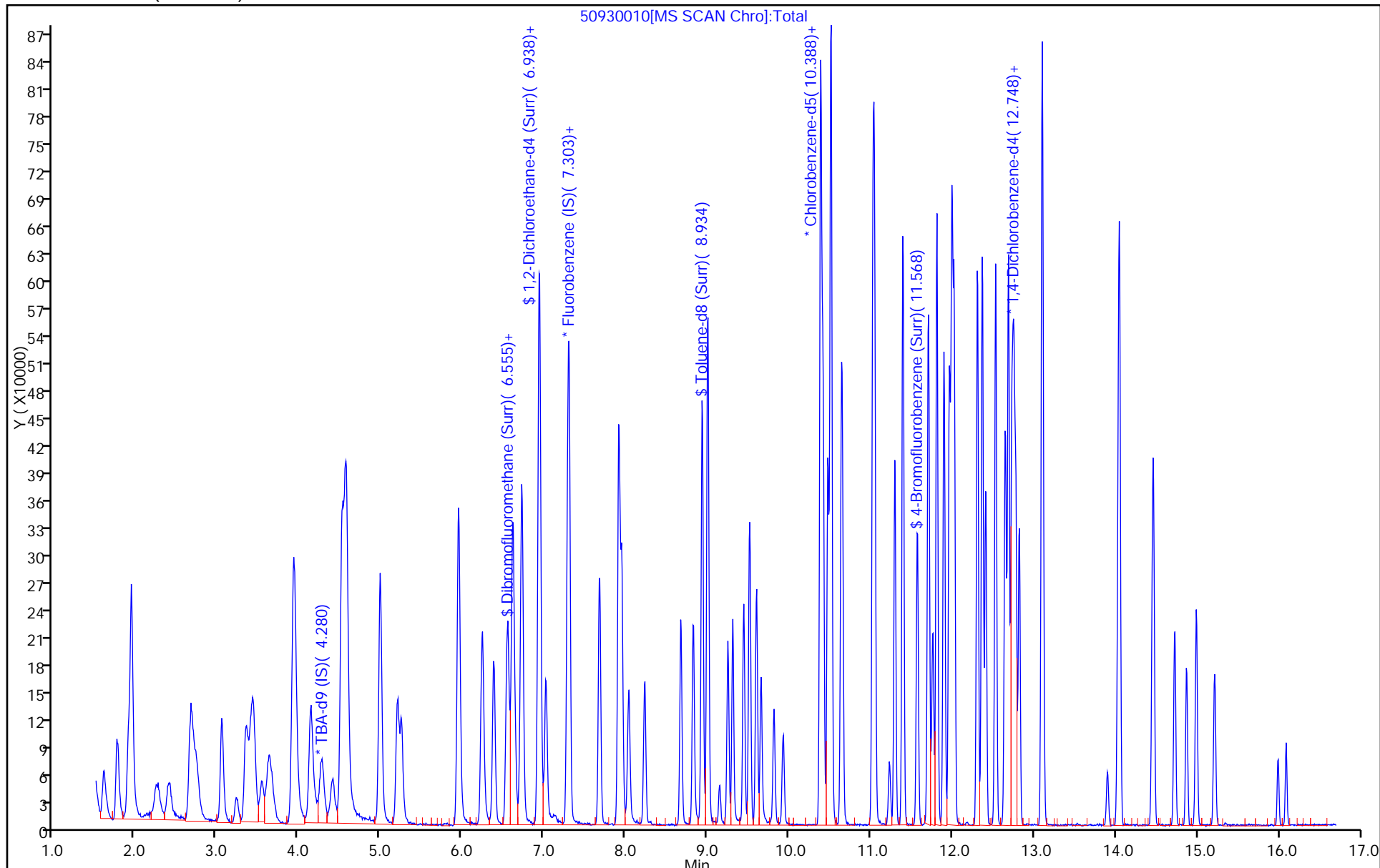
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-155577/12  
 Matrix: Water Lab File ID: 51001012.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 16:59  
 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.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	9.95		1.0	0.28
75-01-4	Vinyl chloride	9.09		1.0	0.23
74-83-9	Bromomethane	10.4		1.0	0.31
75-00-3	Chloroethane	8.45		1.0	0.21
75-35-4	1,1-Dichloroethene	8.69		1.0	0.30
67-64-1	Acetone	20.3		5.0	2.5
75-15-0	Carbon disulfide	8.46		1.0	0.21
75-09-2	Methylene Chloride	8.97		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	8.94		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.18		1.0	0.18
75-34-3	1,1-Dichloroethane	8.89		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.08		1.0	0.24
74-97-5	Bromochloromethane	9.66		1.0	0.18
78-93-3	2-Butanone (MEK)	21.1		5.0	0.55
67-66-3	Chloroform	8.67		1.0	0.17
71-55-6	1,1,1-Trichloroethane	8.93		1.0	0.29
56-23-5	Carbon tetrachloride	8.79		1.0	0.14
71-43-2	Benzene	9.16		1.0	0.11
107-06-2	1,2-Dichloroethane	8.78		1.0	0.21
79-01-6	Trichloroethene	9.54		1.0	0.14
78-87-5	1,2-Dichloropropane	8.97		1.0	0.095
75-27-4	Bromodichloromethane	8.71		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	8.11		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	18.9		5.0	0.53
108-88-3	Toluene	9.90		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	8.57		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.66		1.0	0.20
127-18-4	Tetrachloroethene	10.1		1.0	0.15
591-78-6	2-Hexanone	18.2		5.0	0.16
124-48-1	Dibromochloromethane	9.29		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.76		1.0	0.18
108-90-7	Chlorobenzene	9.88		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.79		1.0	0.28
100-41-4	Ethylbenzene	10.1		1.0	0.23
1330-20-7	Xylenes, Total	20.2		3.0	0.49
100-42-5	Styrene	10.4		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-155577/12  
 Matrix: Water Lab File ID: 51001012.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/01/2015 16:59  
 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.: 155577 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.66		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.1		1.0	0.20
107-13-1	Acrylonitrile	97.7		20	0.55
123-91-1	1,4-Dioxane	247		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		64-135
2037-26-5	Toluene-d8 (Surr)	90		71-118
460-00-4	4-Bromofluorobenzene (Surr)	94		70-118
1868-53-7	Dibromofluoromethane (Surr)	88		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001012.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 01-Oct-2015 16:59:30 ALS Bottle#: 9 Worklist Smp#: 12  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: LCS  
 Misc. Info.: 180-0008778-012  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 01-Oct-2015 17:10:57 Calib Date: 26-Aug-2015 17:52:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20150826-8300.b\50826014.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK009

First Level Reviewer: fergusond

Date: 01-Oct-2015 17:10:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.284	4.278	0.006	0	125325	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.289	7.289	0.000	98	367204	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.386	0.000	87	87820	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.728	12.728	0.000	92	136912	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.565	6.559	0.006	93	79791	50.0	44.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.936	6.936	0.000	0	98914	50.0	39.9	
\$ 7 Toluene-d8 (Surr)	98	8.938	8.938	0.000	94	305761	50.0	45.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.572	11.572	0.000	90	119961	50.0	46.9	
11 Dichlorodifluoromethane	85	1.607	1.613	-0.006	99	103206	50.0	49.7	
12 Chloromethane	50	1.772	1.759	0.013	99	151484	50.0	49.7	
13 Vinyl chloride	62	1.905	1.905	0.000	98	122756	50.0	45.4	
14 Butadiene	39	1.948	1.936	0.012	99	177661	50.0	55.7	
15 Bromomethane	94	2.240	2.234	0.006	88	57051	50.0	51.9	
16 Chloroethane	64	2.410	2.386	0.024	99	68858	50.0	42.2	
17 Dichlorofluoromethane	67	2.678	2.666	0.012	97	151883	50.0	43.9	
18 Trichlorofluoromethane	101	2.690	2.702	-0.012	92	121919	50.0	47.1	
20 Ethyl ether	59	3.055	3.049	0.006	97	106422	50.0	44.4	
21 Acrolein	56	3.232	3.232	0.000	99	45556	150.0	127.5	
22 1,1-Dichloroethene	96	3.353	3.347	0.006	97	88836	50.0	43.4	
23 1,1,2-Trichloro-1,2,2-trif	101	3.420	3.414	0.006	93	98611	50.0	45.5	
24 Acetone	43	3.445	3.438	0.007	95	75206	100.0	101.5	
25 Iodomethane	142	3.542	3.542	0.000	97	149392	50.0	49.0	
26 Carbon disulfide	76	3.639	3.633	0.006	100	200810	50.0	42.3	
28 3-Chloro-1-propene	76	3.925	3.925	0.000	90	47748	50.0	41.2	
30 Methyl acetate	43	3.949	3.937	0.012	100	527768	250.0	238.4	
31 Methylene Chloride	84	4.144	4.138	0.006	98	109161	50.0	44.9	
32 2-Methyl-2-propanol	59	4.418	4.406	0.012	88	74560	500.0	528.6	
33 Acrylonitrile	53	4.527	4.521	0.006	99	524900	500.0	488.6	
34 trans-1,2-Dichloroethene	96	4.570	4.564	0.006	96	99209	50.0	44.7	
35 Methyl tert-butyl ether	73	4.582	4.576	0.006	96	235873	50.0	45.9	
36 Hexane	57	4.990	4.990	0.000	95	164862	50.0	44.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.203	5.196	0.007	96	194363	50.0	44.4	
38 Vinyl acetate	43	5.257	5.245	0.012	97	218258	50.0	66.5	
44 2,2-Dichloropropane	77	5.945	5.945	0.000	58	71144	50.0	40.6	
45 cis-1,2-Dichloroethene	96	5.951	5.951	0.000	86	107691	50.0	45.4	
46 2-Butanone (MEK)	43	5.963	5.957	0.006	75	117542	100.0	105.6	
49 Chlorobromomethane	128	6.237	6.231	0.006	93	50311	50.0	48.3	
51 Tetrahydrofuran	42	6.255	6.249	0.006	93	82800	100.0	92.7	
52 Chloroform	83	6.383	6.383	0.000	95	163796	50.0	43.3	
53 1,1,1-Trichloroethane	97	6.541	6.541	0.000	98	124794	50.0	44.7	
54 Cyclohexane	56	6.620	6.614	0.006	96	201327	50.0	43.1	
56 Carbon tetrachloride	117	6.717	6.711	0.006	96	104644	50.0	44.0	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	90	137215	50.0	44.4	
57 Isobutyl alcohol	41	6.930	6.924	0.006	86	74783	1250.0	1069.4	
58 Benzene	78	6.949	6.942	0.007	98	414890	50.0	45.8	
59 1,2-Dichloroethane	62	7.022	7.022	0.000	96	137428	50.0	43.9	
62 n-Heptane	43	7.308	7.307	0.001	96	152754	50.0	45.1	
64 Trichloroethene	130	7.679	7.679	0.000	95	105692	50.0	47.7	
66 Methylcyclohexane	83	7.916	7.916	0.000	96	158200	50.0	45.3	
67 1,2-Dichloropropane	63	7.952	7.952	0.000	95	106605	50.0	44.9	
70 1,4-Dioxane	88	8.025	8.025	0.000	37	20213	1000.0	1234.0	
68 Dibromomethane	93	8.031	8.031	0.000	92	53045	50.0	44.0	
71 Dichlorobromomethane	83	8.232	8.232	0.000	97	103869	50.0	43.5	
74 cis-1,3-Dichloropropene	75	8.676	8.676	0.000	91	113361	50.0	40.5	
75 4-Methyl-2-pentanone (MIBK)	43	8.828	8.822	0.006	99	204889	100.0	94.7	
76 Toluene	91	9.005	9.005	0.000	98	430415	50.0	49.5	
77 trans-1,3-Dichloropropene	75	9.248	9.254	-0.006	98	97194	50.0	42.8	
78 Ethyl methacrylate	69	9.309	9.309	0.000	94	102128	50.0	46.5	
79 1,1,2-Trichloroethane	97	9.449	9.449	0.000	92	79853	50.0	48.3	
80 Tetrachloroethene	164	9.516	9.516	0.000	97	85592	50.0	50.7	
81 1,3-Dichloropropane	76	9.601	9.601	0.000	99	143616	50.0	46.8	
82 2-Hexanone	43	9.656	9.656	0.000	99	142263	100.0	91.1	
84 Chlorodibromomethane	129	9.814	9.814	0.000	91	66511	50.0	46.5	
85 Ethylene Dibromide	107	9.930	9.929	0.001	99	77763	50.0	48.8	
86 3-Chlorobenzotrifluoride	180	10.386	10.392	-0.006	83	142182	50.0	50.9	
87 Chlorobenzene	112	10.416	10.416	0.000	95	276654	50.0	49.4	
88 4-Chlorobenzotrifluoride	180	10.477	10.477	0.000	95	133515	50.0	50.5	
89 1,1,1,2-Tetrachloroethane	131	10.507	10.507	0.000	91	89318	50.0	48.9	
90 Ethylbenzene	106	10.514	10.513	0.001	98	150241	50.0	50.6	
91 m-Xylene & p-Xylene	106	10.647	10.647	0.000	0	185579	50.0	51.0	
92 o-Xylene	106	11.031	11.031	0.000	97	172278	50.0	49.8	
93 Styrene	104	11.049	11.049	0.000	96	298206	50.0	52.1	
94 Bromoform	173	11.231	11.231	0.000	96	35361	50.0	43.3	
96 2-Chlorobenzotrifluoride	180	11.298	11.298	0.000	96	138204	50.0	50.3	
97 Isopropylbenzene	105	11.396	11.396	0.000	96	438892	50.0	51.8	
99 1,1,2,2-Tetrachloroethane	83	11.706	11.706	0.000	79	112983	50.0	50.6	
100 Bromobenzene	156	11.706	11.712	-0.006	92	117186	50.0	49.9	
102 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	70	11864	50.0	14.0	
101 1,2,3-Trichloropropane	110	11.767	11.761	0.006	87	36904	50.0	47.6	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	126181	50.0	46.9	
104 2-Chlorotoluene	126	11.901	11.900	0.001	96	112185	50.0	49.1	
105 3-Chlorotoluene	126	11.961	11.961	0.000	94	118775	50.0	50.5	
106 1,3,5-Trimethylbenzene	105	11.992	11.998	-0.006	96	367402	50.0	48.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	12.022	12.022	0.000	98	126261	50.0	50.2	
108 tert-Butylbenzene	119	12.308	12.308	0.000	95	303456	50.0	49.1	
110 1,2,4-Trimethylbenzene	105	12.369	12.369	0.000	97	374896	50.0	49.2	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.411	-0.006	96	96097	50.0	45.3	
112 sec-Butylbenzene	105	12.533	12.533	0.000	94	421090	50.0	48.3	
113 1,3-Dichlorobenzene	146	12.649	12.649	0.000	98	222398	50.0	53.1	
114 4-Isopropyltoluene	119	12.685	12.691	-0.006	97	365848	50.0	49.6	
115 1,4-Dichlorobenzene	146	12.752	12.752	0.000	96	225389	50.0	51.8	
116 2,4-Dichloro-1-(trifluorom	214	12.777	12.776	0.001	95	94951	50.0	48.3	
118 2,5-Dichlorobenzotrifluori	214	12.819	12.825	-0.006	0	97350	50.0	45.8	
120 n-Butylbenzene	91	13.099	13.099	0.000	98	291931	50.0	46.2	
121 1,2-Dichlorobenzene	146	13.111	13.111	0.000	98	206864	50.0	52.9	
122 1,2-Dibromo-3-Chloropropan	75	13.902	13.902	0.000	75	15138	50.0	47.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.042	14.042	0.000	0	353443	150.0	158.2	
125 2,3- & 3,4- Dichlorotoluen	125	14.462	14.462	0.000	0	228443	100.0	107.3	
126 1,2,4-Trichlorobenzene	180	14.723	14.723	0.000	94	80423	50.0	52.9	
127 Hexachlorobutadiene	225	14.869	14.869	0.000	98	36644	50.0	50.0	
128 Naphthalene	128	14.991	14.991	0.000	97	236990	50.0	60.6	
129 1,2,3-Trichlorobenzene	180	15.210	15.216	-0.006	96	67630	50.0	54.9	
131 2,4,5-Trichlorotoluene	159	15.989	15.995	-0.006	0	22959	50.0	51.7	
130 2,3,6-Trichlorotoluene	159	16.092	16.086	0.006	96	23360	50.0	57.0	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	100.8	
S 134 1,2-Dichloroethene, Total	96				0		100.0	90.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	83.4	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWAcro1stRe_00001	Amount Added: 6.00	Units: uL	
voaWVA2nd Res_00010	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00006	Amount Added: 2.00	Units: uL	
voaWKetmix2nd_00002	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00144	Amount Added: 2.00	Units: uL	
VOA8260INT_00042	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00042	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\ChromNA\Pittsburgh\ChromData\CHHP5\20151001-8778.b\51001012.D

Injection Date: 01-Oct-2015 16:59:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: LCS

Worklist Smp#: 12

Client ID:

Purge Vol: 5.000 mL

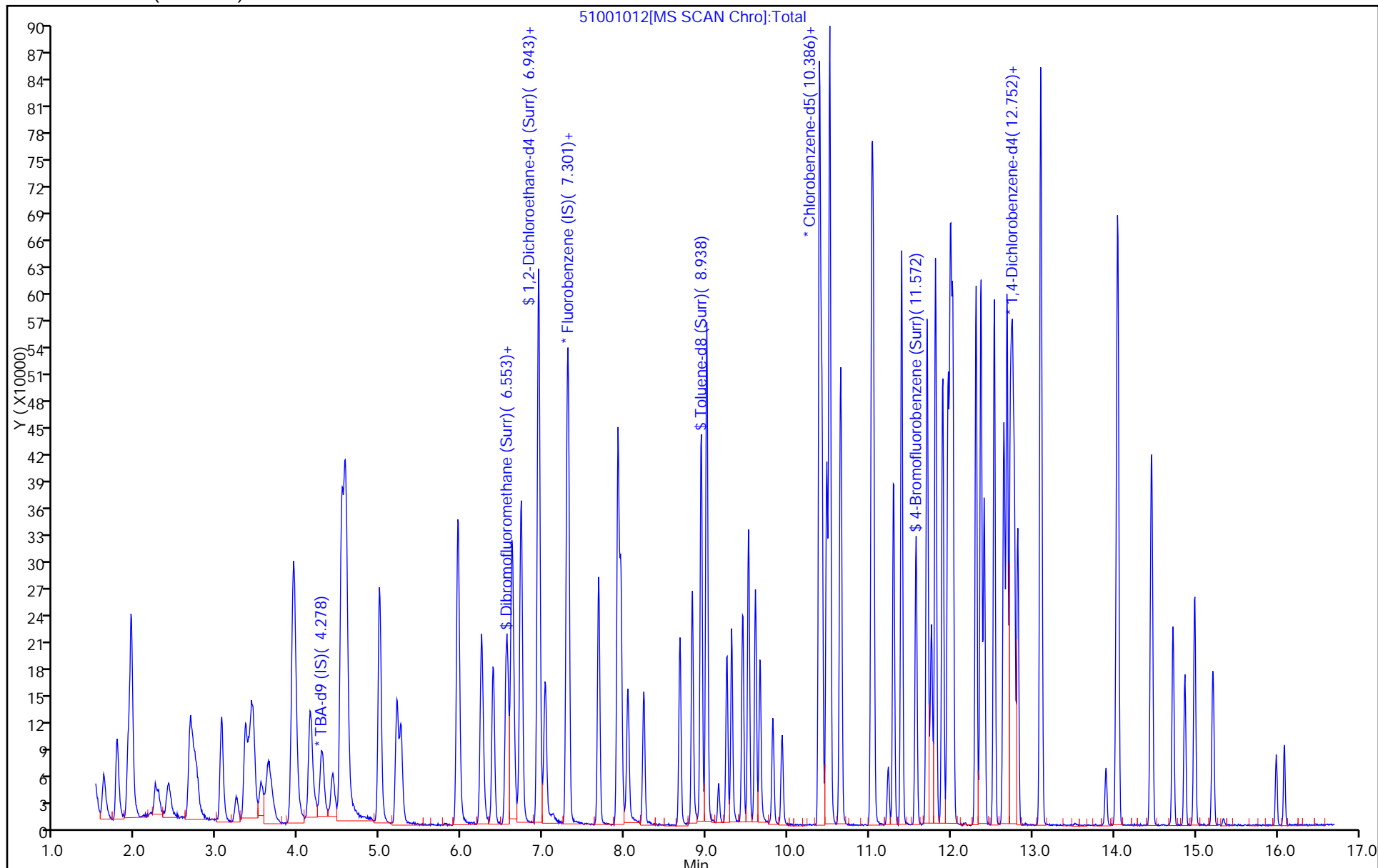
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Instrument ID: CHHP5 Start Date: 08/26/2015 14:01Analysis Batch Number: 151868 End Date: 08/26/2015 20:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-151868/7		08/26/2015 14:01	1	50826007.D	DB-624 0.18 (mm)
IC 180-151868/6		08/26/2015 15:04	1	50826006.D	DB-624 0.18 (mm)
IC 180-151868/8		08/26/2015 15:28	1	50826008.D	DB-624 0.18 (mm)
ICIS 180-151868/9		08/26/2015 15:52	1	50826009.D	DB-624 0.18 (mm)
IC 180-151868/10		08/26/2015 16:16	1	50826010.D	DB-624 0.18 (mm)
IC 180-151868/11		08/26/2015 16:40	1	50826011.D	DB-624 0.18 (mm)
IC 180-151868/12		08/26/2015 17:04	1	50826012.D	DB-624 0.18 (mm)
IC 180-151868/13		08/26/2015 17:28	1	50826013.D	DB-624 0.18 (mm)
IC 180-151868/14		08/26/2015 17:52	1	50826014.D	DB-624 0.18 (mm)
ZZZZZ		08/26/2015 19:52	1		DB-624 0.18 (mm)
ICV 180-151868/20		08/26/2015 20:16	1		DB-624 0.18 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica PittsburghJob No.: 180-48019-1

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

Instrument ID: CHHP5Start Date: 09/30/2015 10:35Analysis Batch Number: 155398End Date: 09/30/2015 20:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-155398/1		09/30/2015 10:35	1	50930001.D	DB-624 0.18 (mm)
CCVIS 180-155398/2		09/30/2015 11:16	1	50930002.D	DB-624 0.18 (mm)
ZZZZZ		09/30/2015 11:52	1		DB-624 0.18 (mm)
MB 180-155398/4		09/30/2015 12:23	1	50930004.D	DB-624 0.18 (mm)
ZZZZZ		09/30/2015 13:02	1		DB-624 0.18 (mm)
ZZZZZ		09/30/2015 13:26	1		DB-624 0.18 (mm)
ZZZZZ		09/30/2015 13:50	1		DB-624 0.18 (mm)
ZZZZZ		09/30/2015 14:14	1		DB-624 0.18 (mm)
ZZZZZ		09/30/2015 14:39	1		DB-624 0.18 (mm)
LCS 180-155398/10		09/30/2015 15:03	1	50930010.D	DB-624 0.18 (mm)
ZZZZZ		09/30/2015 15:51	1		DB-624 0.18 (mm)
180-48019-1	HD-MW-47-0/1-0	09/30/2015 16:15	1	50930013.D	DB-624 0.18 (mm)
180-48019-5	HD-QC6-0/1-2	09/30/2015 16:39	1	50930014.D	DB-624 0.18 (mm)
180-48019-2	HD-MW-49D-0/1-0	09/30/2015 17:03	200	50930015.D	DB-624 0.18 (mm)
180-48019-3	HD-MW-12-0/1-0	09/30/2015 17:27	1	50930016.D	DB-624 0.18 (mm)
ZZZZZ		09/30/2015 17:51	1		DB-624 0.18 (mm)
ZZZZZ		09/30/2015 18:16	1		DB-624 0.18 (mm)
180-48019-7	HD-QC2-0/1-4	09/30/2015 19:04	1	50930020.D	DB-624 0.18 (mm)
180-48019-6	HD-QC2-0/1-3	09/30/2015 19:28	1	50930021.D	DB-624 0.18 (mm)
ZZZZZ		09/30/2015 19:52	1		DB-624 0.18 (mm)
ZZZZZ		09/30/2015 20:16	1		DB-624 0.18 (mm)
ZZZZZ		09/30/2015 20:40	1		DB-624 0.18 (mm)



## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Instrument ID: CHHP5 Start Date: 10/01/2015 13:11Analysis Batch Number: 155577 End Date: 10/01/2015 21:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-155577/6		10/01/2015 13:11	1	51001006.D	DB-624 0.18 (mm)
CCVIS 180-155577/2		10/01/2015 13:46	1	51001002.D	DB-624 0.18 (mm)
ZZZZZ		10/01/2015 13:46	1		DB-624 0.18 (mm)
ZZZZZ		10/01/2015 14:21	1		DB-624 0.18 (mm)
MB 180-155577/7		10/01/2015 14:45	1	51001007.D	DB-624 0.18 (mm)
ZZZZZ		10/01/2015 15:20	1		DB-624 0.18 (mm)
ZZZZZ		10/01/2015 15:46	1		DB-624 0.18 (mm)
ZZZZZ		10/01/2015 16:11	1		DB-624 0.18 (mm)
ZZZZZ		10/01/2015 16:35	1		DB-624 0.18 (mm)
LCS 180-155577/12		10/01/2015 16:59	1	51001012.D	DB-624 0.18 (mm)
180-48019-3 DL	HD-MW-12-0/1-0 DL	10/01/2015 18:12	10	51001015.D	DB-624 0.18 (mm)
180-48019-4	HD-MW-9-0/1-0	10/01/2015 18:36	1	51001016.D	DB-624 0.18 (mm)
ZZZZZ		10/01/2015 19:24	1		DB-624 0.18 (mm)
ZZZZZ		10/01/2015 20:12	25		DB-624 0.18 (mm)
ZZZZZ		10/01/2015 21:01	3		DB-624 0.18 (mm)

# GENERAL CHEMISTRY

COVER PAGE  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-48019-1

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

Project: Harley Davidson

Client Sample ID  
HD-MW-47-0/1-0

Lab Sample ID  
180-48019-1

Comments: \_\_\_\_\_

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: HD-MW-47-0/1-0

Lab Sample ID: 180-48019-1

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

SDG ID.: \_\_\_\_\_

Matrix: Water

Date Sampled: 09/22/2015 10:22

Reporting Basis: WET

Date Received: 09/23/2015 08:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
18540-29-9	Cr (VI)	3.8	0.25	0.048	mg/L			25	7196A

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: HD-MW-47-0/1-0

Lab Sample ID: 180-48019-1

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

SDG ID.: \_\_\_\_\_

Matrix: Water

Date Sampled: 09/22/2015 10:22

Reporting Basis: WET

Date Received: 09/23/2015 08:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
18540-29-9	Cr (VI)	3.9	0.25	0.048	mg/L			25	7196A

2-IN  
 CALIBRATION QUALITY CONTROL  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Analyst: JLR Batch Start Date: 09/23/2015  
 Reporting Units: mg/L Analytical Batch No.: 154558

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	09:28	Cr (VI)	0.252	0.250	101	90-110		WCr6P50i_00030
2	ICB	09:31	Cr (VI)	ND					
3	CCV	09:35	Cr (VI)	0.258	0.250	103	90-110		WCr6S50SP_00045
4	CCB	09:38	Cr (VI)	ND					
13	CCV	10:11	Cr (VI)	0.258	0.250	103	90-110		WCr6S50SP_00045
14	CCB	10:15	Cr (VI)	ND					

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

3-IN  
METHOD BLANK  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-48019-1

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

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 154558 Date: 09/23/2015 09:46							
7196A	MB 180-154558/6	Cr (VI)	ND		mg/L	0.010	1

5-IN  
 MATRIX SPIKE SAMPLE RECOVERY  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 154558 Date: 09/23/2015 09:53											
7196A	180-48019-1	Cr (VI)	3.8		mg/L						
7196A	180-48019-1	Cr (VI)	9.96		mg/L	6.25	99	85-115			
MS											
Batch ID: 154558 Date: 09/23/2015 10:04											
7196A	180-48019-1	Cr (VI)	3.9		mg/L						
7196A	180-48019-1	Cr (VI)	10.2		mg/L	6.25	101	85-115			
MS											

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



5-IN  
 MATRIX SPIKE DUPLICATE SAMPLE RECOVERY  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 154558 Date: 09/23/2015 09:57											
7196A	180-48019-1	Cr (VI)	9.93		mg/L	6.25	98	85-115	0	20	
	MSD										
Batch ID: 154558 Date: 09/23/2015 10:08											
7196A	180-48019-1	Cr (VI)	10.3		mg/L	6.25	102	85-115	1	20	
	MSD										

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

7A-IN  
 LAB CONTROL SAMPLE  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 154558 Date: 09/23/2015 09:42											
						LCS Source: WCr6S50SP_00045					
7196A	LCS 180-154558/5	Cr (VI)	0.260		mg/L	0.250	104	85-115			

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

9-IN  
DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh

Job Number: 180-48019-1

SDG Number: \_\_\_\_\_

Matrix: Water

Instrument ID: GENESYS10S

Method: 7196A

MDL Date: 01/23/2013 13:32

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cr (VI)	540	0.01	0.0019

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-48019-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: GENESYS10S  
Method: 7196A XMDL Date: 01/23/2013 13:33

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cr (VI)	540	0.01	0.0019

9-IN  
DETECTION LIMITS  
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Pittsburgh

Job Number: 180-48019-1

SDG Number: \_\_\_\_\_

Matrix: Water

Instrument ID: GENESYS10S

Method: 7196A

MDL Date: 01/23/2013 13:32

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Cr (VI)	540	0.01	0.0019

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Pittsburgh Job Number: 180-48019-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: GENESYS10S  
Method: 7196A XMDL Date: 01/23/2013 13:33

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cr (VI)	540	0.01	0.0019

13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Instrument ID: GENESYS10S Analysis Method: 7196A

Start Date: 09/23/2015 09:28 End Date: 09/23/2015 10:15

Lab Sample Id	D/F	T y p e	Time	C r 6	Analytes																			
ICV 180-154558/1	1		09:28	X																				
ICB 180-154558/2	1		09:31	X																				
CCV 180-154558/3	1		09:35	X																				
CCB 180-154558/4	1		09:38	X																				
LCS 180-154558/5	1	T	09:42	X																				
MB 180-154558/6	1	T	09:46	X																				
180-48019-1	25	T	09:49	X																				
180-48019-1 MS	25	T	09:53	X																				
180-48019-1 MSD	25	T	09:57	X																				
180-48019-1	25	D	10:00	X																				
180-48019-1 MS	25	D	10:04	X																				
180-48019-1 MSD	25	D	10:08	X																				
CCV 180-154558/13	1		10:11	X																				
CCB 180-154558/14	1		10:15	X																				

Prep Types: \_\_\_\_\_  
D = Dissolved  
T = Total/NA

Calibration

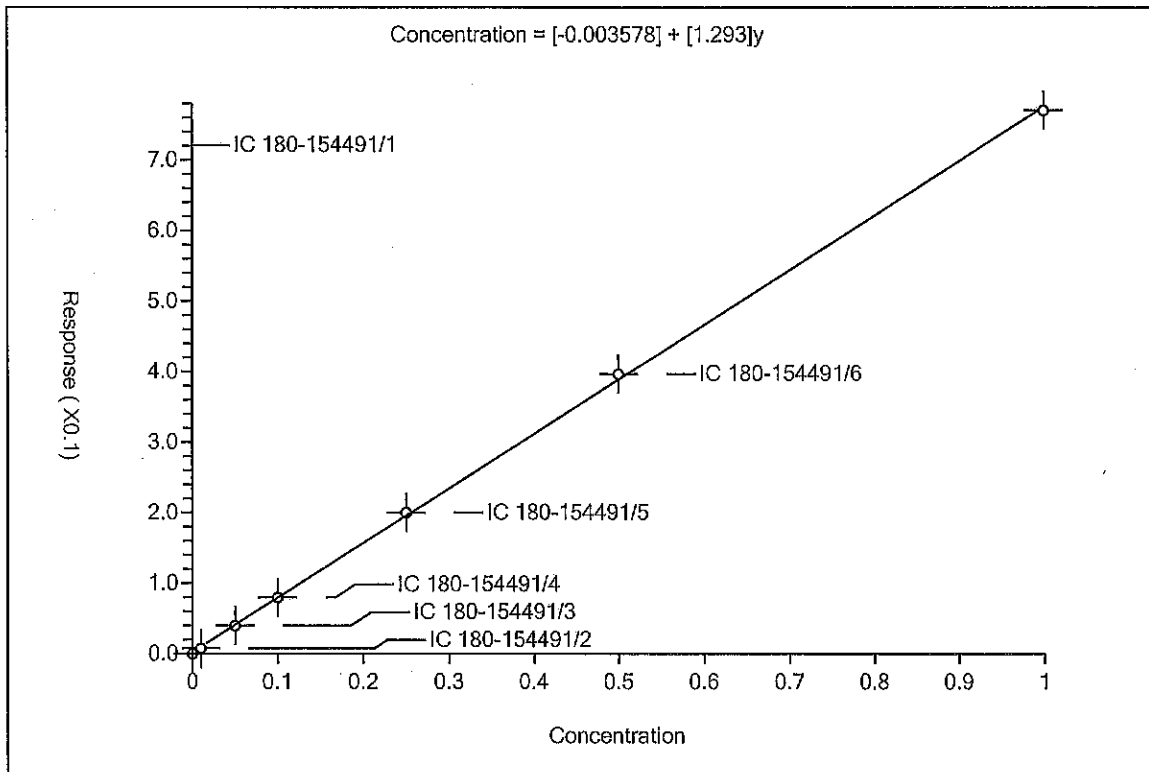
*JR 4/25/15*

Calib 154491-0 / Cr (VI)

Curve Type: Linear  
 Weighting: None  
 Origin: None  
 Dependency: Concentration  
 Calib Mode: ESTD  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.003578
Slope:	1.293
Error Coefficients	
Standard Error:	0.006184
Relative Standard Error:	NC
Correlation Coefficient:	0.9999
Coefficient of Determination (Adjusted): 0.9998 (0.9998)	

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 180-154491/1	0.0	0.0			NaN	Y
2	IC 180-154491/2	0.01	0.008			0.800038	Y
3	IC 180-154491/3	0.049998	0.04			0.800038	Y
4	IC 180-154491/4	0.099995	0.08			0.800038	Y
5	IC 180-154491/5	0.249988	0.2			0.800038	Y
6	IC 180-154491/6	0.499976	0.397			0.794038	Y
7	IC 180-154491/7	0.999953	0.771			0.771037	Y





FR 9/25/15

154558

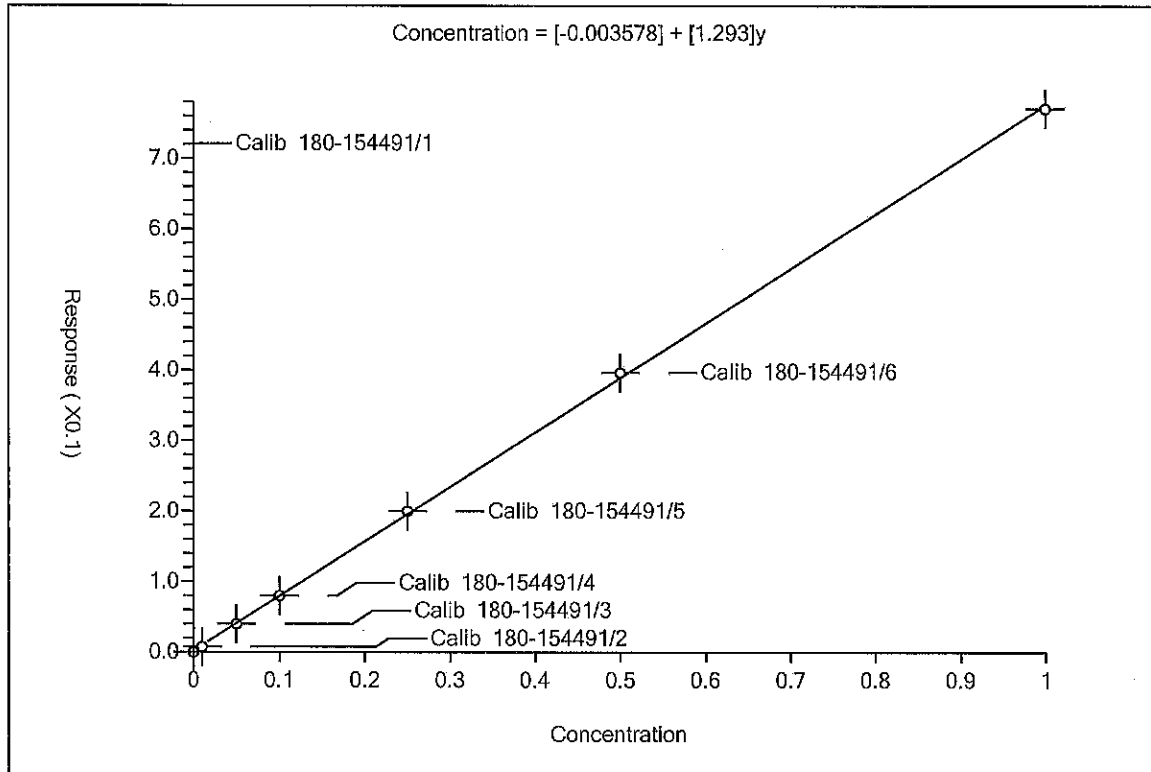
Calibration

Calib 154491-0 / Cr (VI)

Curve Type: Linear  
 Weighting: None  
 Origin: None  
 Dependency: Concentration  
 Calib Mode: ESTD  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.003578
Slope:	1.293
Error Coefficients	
Standard Error:	0.006184
Relative Standard Error:	NC
Correlation Coefficient:	0.9999
Coefficient of Determination (Adjusted):	0.9998 (0.9998)

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	Calib 180-154491/1	0.0	0.0			NaN	Y
2	Calib 180-154491/2	0.01	0.008			0.800038	Y
3	Calib 180-154491/3	0.049998	0.04			0.800038	Y
4	Calib 180-154491/4	0.099995	0.08			0.800038	Y
5	Calib 180-154491/5	0.249988	0.2			0.800038	Y
6	Calib 180-154491/6	0.499976	0.397			0.794038	Y
7	Calib 180-154491/7	0.999953	0.771			0.771037	Y



GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Batch Number: 154491 Batch Start Date: 09/22/15 17:16 Batch Analyst: Rumble, Jennifer L

Batch Method: 7196A Batch End Date: 09/22/15 18:04

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ColorBlk	UnCorResp	CalcMsg	Initial pH
IC 180-154491/1		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.000 Absorbance	OK	>2.0 SU
IC 180-154491/2		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.008 Absorbance	OK	>2.0 SU
IC 180-154491/3		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.040 Absorbance	OK	>2.0 SU
IC 180-154491/4		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.080 Absorbance	OK	>2.0 SU
IC 180-154491/5		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.200 Absorbance	OK	>2.0 SU
IC 180-154491/6		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.397 Absorbance	OK	>2.0 SU
IC 180-154491/7		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.771 Absorbance	OK	>2.0 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	Final pH	WCr6P5i 00719			
IC 180-154491/1		7196A		<2.0 SU				
IC 180-154491/2		7196A		<2.0 SU	0.1 mL			
IC 180-154491/3		7196A		<2.0 SU	0.5 mL			
IC 180-154491/4		7196A		<2.0 SU	1 mL			
IC 180-154491/5		7196A		<2.0 SU	2.5 mL			
IC 180-154491/6		7196A		<2.0 SU	5 mL			
IC 180-154491/7		7196A		<2.0 SU	10 mL			

Batch Notes	
Spectrophotometer Cell Path Length	1 cm
Color Reagent ID Number	1711100
Pipette ID	G1888373U
Sulfuric Acid Reagent ID Number	1668790

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Batch Number: 154558 Batch Start Date: 09/23/15 09:28 Batch Analyst: Rumble, Jennifer L

Batch Method: 7196A Batch End Date: 09/23/15 10:19

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ColorBlk	UnCorResp	CalcMsg	Initial pH
ICV 180-154558/1		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.198 Absorbance	OK	>2.0 SU
ICB 180-154558/2		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.000 Absorbance	OK	>2.0 SU
CCV 180-154558/3		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.202 Absorbance	OK	>2.0 SU
CCB 180-154558/4		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.000 Absorbance	OK	>2.0 SU
LCS 180-154558/5		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.204 Absorbance	OK	>2.0 SU
MB 180-154558/6		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.000 Absorbance	OK	>2.0 SU
180-48019-A-1	HD-MW-47-0/1-0	7196A	T	25.0 mL	25.0 mL	0.002 Absorbance	0.122 Absorbance	OK	>2.0 SU
180-48019-A-1 MS	HD-MW-47-0/1-0	7196A	T	25.0 mL	25.0 mL	0.002 Absorbance	0.313 Absorbance	OK	>2.0 SU
180-48019-A-1 MSD	HD-MW-47-0/1-0	7196A	T	25.0 mL	25.0 mL	0.002 Absorbance	0.312 Absorbance	OK	>2.0 SU
180-48019-B-1	HD-MW-47-0/1-0	7196A	D	25.0 mL	25.0 mL	0.000 Absorbance	0.122 Absorbance	OK	>2.0 SU
180-48019-B-1 MS	HD-MW-47-0/1-0	7196A	D	25.0 mL	25.0 mL	0.000 Absorbance	0.318 Absorbance	OK	>2.0 SU
180-48019-B-1 MSD	HD-MW-47-0/1-0	7196A	D	25.0 mL	25.0 mL	0.000 Absorbance	0.320 Absorbance	OK	>2.0 SU
CCV 180-154558/13		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.202 Absorbance	OK	>2.0 SU
CCB 180-154558/14		7196A		50.0 mL	50.0 mL	0.000 Absorbance	0.000 Absorbance	OK	>2.0 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	Final pH	WCr6P50i 00030	WCr6S50SP 00045	AnalysisComment
ICV 180-154558/1		7196A		<2.0 SU	0.25 mL		
ICB 180-154558/2		7196A		<2.0 SU			
CCV 180-154558/3		7196A		<2.0 SU		0.25 mL	
CCB 180-154558/4		7196A		<2.0 SU			
LCS 180-154558/5		7196A		<2.0 SU		0.25 mL	
MB 180-154558/6		7196A		<2.0 SU			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Batch Number: 154558 Batch Start Date: 09/23/15 09:28 Batch Analyst: Rumble, Jennifer L

Batch Method: 7196A Batch End Date: 09/23/15 10:19

Lab Sample ID	Client Sample ID	Method Chain	Basis	Final pH	WCr6P50i 00030	WCr6S50SP 00045	AnalysisComment		
180-48019-A-1	HD-MW-47-0/1-0	7196A	T	1.5 SU					
180-48019-A-1 MS	HD-MW-47-0/1-0	7196A	T	1.5 SU		0.125 mL			
180-48019-A-1 MSD	HD-MW-47-0/1-0	7196A	T	1.5 SU		0.125 mL			
180-48019-B-1	HD-MW-47-0/1-0	7196A	D	1.5 SU			field filtered and lab filtered (Filtration bt 154565 to generate 180-48019-b-1-a )		
180-48019-B-1 MS	HD-MW-47-0/1-0	7196A	D	1.5 SU		0.125 mL	field filtered and lab filtered (Filtration bt 154565 to generate 180-48019-b-1-a )		
180-48019-B-1 MSD	HD-MW-47-0/1-0	7196A	D	1.5 SU		0.125 mL	field filtered and lab filtered (Filtration bt 154565 to generate 180-48019-b-1-a )		
CCV 180-154558/13		7196A		<2.0 SU		0.25 mL			
CCB 180-154558/14		7196A		<2.0 SU					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-48019-1

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

Batch Number: 154558 Batch Start Date: 09/23/15 09:28 Batch Analyst: Rumble, Jennifer L

Batch Method: 7196A Batch End Date: 09/23/15 10:19

Batch Notes	
Batch Comment	all samples were 1mL sample to 24mL DI
Spectrophotometer Cell Path Length	1 cm
Color Reagent ID Number	1711100
Pipette ID	G1888373U
Sulfuric Acid Reagent ID Number	1668790

Basis	Basis Description
T	Total/NA
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Shipping and Receiving Documents

**TestAmerica Pittsburgh**  
301 Alpha Drive  
Pittsburgh, PA 15238  
phone 412.963.7058 fax 412.963.2470

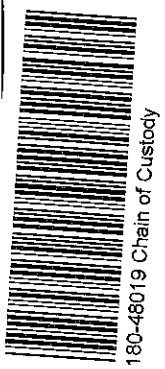
**TestAmerica Laboratories, Inc.**

**Client Contact**  
 Groundwater Sciences Corporation  
 2601 Market Place St. Suite 310  
 Harrisburg, PA 17110  
 Phone (717) 901-8180  
 FAX (717) 657-1611  
 Project Name: 2015 Comprehensive Event  
 Site: Harley-Davidson, York PA  
 Quote # 18000557

**Project Manager:** Jennifer S. Reese  
**Tel/Fax:** 717-901-8181 / (717) 657-1611  
**Analysis Turnaround Time**  
 Calendar (C) or Work Days (W)    
 TAT, if different from below, Standard  
 2 weeks  
 1 week  
 5 days  
 1 day

**Site Contact:** Jennifer S. Reese  
**Lab Contact:** Carrie Gamber  
**Date Submitted:** 9/22/2015  
**Carrier:** FEDEX  
**COC No.:** IAP2015092204  
**Lab No.:** 1001227  
**Container No.:**  
**SDG No.:**

Sample ID	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Total CR 6+ (SW846 7196A)	Disolved Cr 6+ (SW846 7196A)	1,4-Dioxane (SW846 8270D LL)
HD-MW-47-01-0	9/22/15	10:22	Groundwater	Water	5	X	X	X	
HD-MW-49D-01-0	9/22/15	12:57	Groundwater	Water	3	X			
HD-MW-12-01-0	9/22/15	14:00	Groundwater	Water	3	X			
HD-MW-9-01-0	9/22/15	12:40	Groundwater	Water	3	X			
HD-QC6-01-2	9/22/15	12:00	Trip Blank	Water	2	X			
HD-QC2-01-3	9/22/15	15:00	Rinse Blank	Water	3	X			
HD-QC2-01-4	9/22/15	15:05	Field Blank	Water	3	X			



Preservation Used	165-12	HCL	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	10% NaOH	
Field Filter																				

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

**Sample Disposal** (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab

Months  1  2  3  4  5  6  7  8  9  10  11  12

**Special Instructions/QC Requirements & Comments:** CLP Like Deliverables

**Relinquished by:** (Print and Sign) *[Signature]* Company: GSC  
 Date/Time: 9/22/15 15:25

**Relinquished by:** *[Signature]* Company: TAP  
 Date/Time: 9/22/15 16:50

**Relinquished by:** *[Signature]* Company: TAP  
 Date/Time: 9/22/15 16:50

**Relinquished by:** *[Signature]* Company: TAP  
 Date/Time: 9/22/15 16:50

ORIGIN ID: KPDA (610) 337-9992  
SHIP DATE: 22SEP15  
ACTWT: 56.00 LB  
CAD: 8490299/INET3670

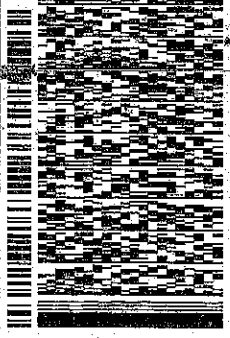
SHIP DATE: 22SEP15  
ACTWT: 56.00 LB  
CAD: 8490299/INET3670  
BILL RECIPIENT



TO SAMPLE RECEIPT  
TEST AMERICA - P  
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7058  
REF: INV: PO:



2 of 2  
MPS# 7745 7040 9547  
Mstr# 7745 7040 9216  
WED - 23 SEP AA  
STANDARD OVERNIGHT

EV AGCA  
15238  
PA-US PIT

Uncorrected temp 49.9 °C  
Thermometer ID Z  
CF O Initials DW

PT-WF-SR-001 effective 7/26/13

Part # 166297-435 RIT2 07/15

ORIGIN ID: KPDA (610) 337-9992  
SHIP DATE: 22SEP15  
ACTWT: 56.00 LB  
CAD: 8490299/INET3670

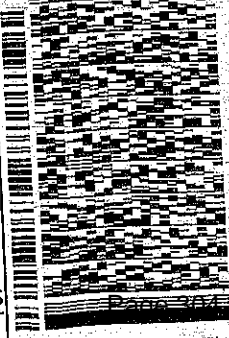
ORIGIN ID: KPDA (610) 337-9992  
SHIP DATE: 22SEP15  
ACTWT: 56.00 LB  
CAD: 8490299/INET3670  
BILL RECIPIENT



TO SAMPLE RECEIPT  
TEST AMERICA - PITTSBURGH  
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7058  
REF: INV: PO:



1 of 2  
TRK# 7745 7040 9216  
Mstr# 7745 7040 9216  
WED - 23 SEP AA  
STANDARD OVERNIGHT

EV AGCA  
15238  
PA-US PIT

Uncorrected temp 46 °C  
Thermometer ID Z  
CF O Initials DW

PT-WF-SR-001 effective 7/26/13

Part # 166297-435 RIT2 07/15

ESTING  
10



# Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-48019-1

**Login Number: 48019**

**List Source: TestAmerica Pittsburgh**

**List Number: 1**

**Creator: Kovitch, Christina M**

<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.	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	