

## ANALYTICAL REPORT

Job Number: 180-40617-1

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  
2/3/2015 8:01 AM

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Carrie L Gamber, Senior Project Manager  
301 Alpha Drive, Pittsburgh, PA, 15238  
(412)963-2428  
carrie.gamber@testamericainc.com  
02/03/2015

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**TestAmerica Laboratories, Inc.**

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

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# Definitions/Glossary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

### HPLC/IC

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

### General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

## CASE NARRATIVE

**Client: Groundwater Sciences Corporation**

**Project: Harley Davidson**

**Report Number: 180-40617-1**

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 01/21/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.3 C.

The COC lists 3 vv for the Trip Blank; however only 2 vv were received.

### **VOLATILES**

Several samples were diluted to bring the concentration of target analytes within the calibration range. Elevated reporting limits (RLs) are provided.

### **METALS (ICP/MS)**

Calcium, Potassium and Sodium were detected in method blank MB 180-131708/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Some Internal standard (ISTDs) responses for the following sample were outside of the acceptance limits low: (180-40655-1 SD). All instrument (CCV/CCB) and LCS/PDS recoveries were within the control limits.

Some Internal standard (ISTDs) responses for the following samples were outside of the acceptance limits low: (180-40655-1 MS), (180-40655-1 MSD), (180-40655-1 PDS), (180-40655-1 SD), FMA-E-45 (180-40655-1). All instrument (CCV/CCB) and LCS/PDS recoveries were within the control limits.

### **GENERAL CHEMISTRY**

Samples HD-CW-9-0/1-0 (1) and HD-CW-13-0/1-0 (2) required dilution prior to analysis for Chloride. The reporting limits have been adjusted accordingly.

Bicarbonate Alkalinity as CaCO<sub>3</sub> and Total Alkalinity as CaCO<sub>3</sub> to pH 4.5 were detected in method blank MB 180-131782/2 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Nitrate as N was detected in method blank MB 180-131352/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

# Detection Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Lab Sample ID: 180-40617-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	6.4	J	13	3.7	ug/L	12.5		8260C	Total/NA
1,1-Dichloroethane	5.0	J	13	1.5	ug/L	12.5		8260C	Total/NA
cis-1,2-Dichloroethene	170		13	3.0	ug/L	12.5		8260C	Total/NA
1,1,1-Trichloroethane	21		13	3.6	ug/L	12.5		8260C	Total/NA
Trichloroethene	130		13	1.8	ug/L	12.5		8260C	Total/NA
Tetrachloroethene	410		13	1.9	ug/L	12.5		8260C	Total/NA
Chlorobenzene	1.8	J	13	1.7	ug/L	12.5		8260C	Total/NA
Nitrate as N	6.6	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	240		5.0	0.98	mg/L	5		300.0	Total/NA
Sulfate	37		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	120000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	30000	B	100	5.8	ug/L	1		6020A	Total/NA
Magnesium	27000	B	100	1.2	ug/L	1		6020A	Total/NA
Sodium	73000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	260	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	260	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

**Client Sample ID: HD-CW-13-0/1-0**

**Lab Sample ID: 180-40617-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	23	J	25	5.7	ug/L	25		8260C	Total/NA
1,1-Dichloroethene	19	J	25	7.4	ug/L	25		8260C	Total/NA
1,1-Dichloroethane	8.7	J	25	2.9	ug/L	25		8260C	Total/NA
cis-1,2-Dichloroethene	1200	E	25	5.9	ug/L	25		8260C	Total/NA
1,1,1-Trichloroethane	39		25	7.2	ug/L	25		8260C	Total/NA
Trichloroethene	540		25	3.6	ug/L	25		8260C	Total/NA
Tetrachloroethene	430		25	3.7	ug/L	25		8260C	Total/NA
Vinyl chloride - DL	22	J	50	11	ug/L	50		8260C	Total/NA
cis-1,2-Dichloroethene - DL	1200		50	12	ug/L	50		8260C	Total/NA
1,1,1-Trichloroethane - DL	38	J	50	14	ug/L	50		8260C	Total/NA
Trichloroethene - DL	500		50	7.2	ug/L	50		8260C	Total/NA
Tetrachloroethene - DL	360		50	7.4	ug/L	50		8260C	Total/NA
Nitrate as N	8.5	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	350		5.0	0.98	mg/L	5		300.0	Total/NA
Sulfate	37		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	150000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	30000	B	100	5.8	ug/L	1		6020A	Total/NA
Magnesium	25000	B	100	1.2	ug/L	1		6020A	Total/NA
Sodium	87000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	300	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	300	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

**Client Sample ID: HD-CW-15A-0/1-0**

**Lab Sample ID: 180-40617-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	2300		500	150	ug/L	500		8260C	Total/NA
1,1-Dichloroethane	130	J	500	58	ug/L	500		8260C	Total/NA
cis-1,2-Dichloroethene	11000		500	120	ug/L	500		8260C	Total/NA
1,1,1-Trichloroethane	13000		500	140	ug/L	500		8260C	Total/NA
Trichloroethene	2600		500	72	ug/L	500		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

# Detection Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Client Sample ID: HD-CW-15A-0/1-0 (Continued)

## Lab Sample ID: 180-40617-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2700		500	74	ug/L	500		8260C	Total/NA
Nitrate as N	1.3	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	110		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	30		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	72000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	8000	B	100	5.8	ug/L	1		6020A	Total/NA
Magnesium	7400	B	100	1.2	ug/L	1		6020A	Total/NA
Sodium	46000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: HD-CW-17-0/1-0

## Lab Sample ID: 180-40617-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	19		5.0	1.5	ug/L	5		8260C	Total/NA
1,1-Dichloroethane	4.4	J	5.0	0.58	ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	250	E	5.0	1.2	ug/L	5		8260C	Total/NA
1,1,1-Trichloroethane	64		5.0	1.4	ug/L	5		8260C	Total/NA
Trichloroethene	240	E	5.0	0.72	ug/L	5		8260C	Total/NA
Tetrachloroethene	290	E	5.0	0.74	ug/L	5		8260C	Total/NA
1,1-Dichloroethene - DL	22		20	5.9	ug/L	20		8260C	Total/NA
1,1-Dichloroethane - DL	4.6	J	20	2.3	ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene - DL	260		20	4.7	ug/L	20		8260C	Total/NA
1,1,1-Trichloroethane - DL	70		20	5.7	ug/L	20		8260C	Total/NA
Trichloroethene - DL	230		20	2.9	ug/L	20		8260C	Total/NA
Tetrachloroethene - DL	290		20	3.0	ug/L	20		8260C	Total/NA
Nitrate as N	3.1	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	190		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	74		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	130000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	13000	B	100	5.8	ug/L	1		6020A	Total/NA
Magnesium	14000	B	100	1.2	ug/L	1		6020A	Total/NA
Sodium	65000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	250	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	250	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: HD-CW-20-0/1-0

## Lab Sample ID: 180-40617-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	47	J	50	15	ug/L	50		8260C	Total/NA
1,1-Dichloroethane	36	J	50	5.8	ug/L	50		8260C	Total/NA
cis-1,2-Dichloroethene	510		50	12	ug/L	50		8260C	Total/NA
1,1,1-Trichloroethane	240		50	14	ug/L	50		8260C	Total/NA
Trichloroethene	600		50	7.2	ug/L	50		8260C	Total/NA
Tetrachloroethene	360		50	7.4	ug/L	50		8260C	Total/NA
Nitrate as N	3.9	B	0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	170		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	30		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	96000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6800	B	100	5.8	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pittsburgh

# Detection Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Client Sample ID: HD-CW-20-0/1-0 (Continued)

## Lab Sample ID: 180-40617-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	19000	B	100	1.2	ug/L	1		6020A	Total/NA
Sodium	51000	B	100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	200	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	200	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

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

## Lab Sample ID: 180-40617-6

No Detections.

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: 180-40617-1

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

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

**Lab Sample ID: 180-40617-1**

**Date Collected: 01/20/15 07:25**

**Matrix: Water**

**Date Received: 01/21/15 10:10**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	13	U	13	3.5	ug/L			01/28/15 14:00	12.5
Vinyl chloride	13	U	13	2.8	ug/L			01/28/15 14:00	12.5
Bromomethane	13	U	13	3.9	ug/L			01/28/15 14:00	12.5
Chloroethane	13	U	13	2.7	ug/L			01/28/15 14:00	12.5
<b>1,1-Dichloroethene</b>	<b>6.4</b>	<b>J</b>	13	3.7	ug/L			01/28/15 14:00	12.5
Acetone	63	U	63	31	ug/L			01/28/15 14:00	12.5
Carbon disulfide	13	U	13	2.7	ug/L			01/28/15 14:00	12.5
Methylene Chloride	13	U	13	1.6	ug/L			01/28/15 14:00	12.5
trans-1,2-Dichloroethene	13	U	13	2.1	ug/L			01/28/15 14:00	12.5
Methyl tert-butyl ether	13	U	13	2.3	ug/L			01/28/15 14:00	12.5
<b>1,1-Dichloroethane</b>	<b>5.0</b>	<b>J</b>	13	1.5	ug/L			01/28/15 14:00	12.5
<b>cis-1,2-Dichloroethene</b>	<b>170</b>		13	3.0	ug/L			01/28/15 14:00	12.5
Bromochloromethane	13	U	13	2.3	ug/L			01/28/15 14:00	12.5
2-Butanone (MEK)	63	U	63	6.8	ug/L			01/28/15 14:00	12.5
Chloroform	13	U	13	2.1	ug/L			01/28/15 14:00	12.5
<b>1,1,1-Trichloroethane</b>	<b>21</b>		13	3.6	ug/L			01/28/15 14:00	12.5
Carbon tetrachloride	13	U	13	1.7	ug/L			01/28/15 14:00	12.5
Benzene	13	U	13	1.3	ug/L			01/28/15 14:00	12.5
1,2-Dichloroethane	13	U	13	2.6	ug/L			01/28/15 14:00	12.5
<b>Trichloroethene</b>	<b>130</b>		13	1.8	ug/L			01/28/15 14:00	12.5
1,2-Dichloropropane	13	U	13	1.2	ug/L			01/28/15 14:00	12.5
Bromodichloromethane	13	U	13	1.6	ug/L			01/28/15 14:00	12.5
cis-1,3-Dichloropropene	13	U	13	2.3	ug/L			01/28/15 14:00	12.5
4-Methyl-2-pentanone (MIBK)	63	U	63	6.6	ug/L			01/28/15 14:00	12.5
Toluene	13	U	13	1.9	ug/L			01/28/15 14:00	12.5
trans-1,3-Dichloropropene	13	U	13	1.9	ug/L			01/28/15 14:00	12.5
1,1,2-Trichloroethane	13	U	13	2.5	ug/L			01/28/15 14:00	12.5
<b>Tetrachloroethene</b>	<b>410</b>		13	1.9	ug/L			01/28/15 14:00	12.5
2-Hexanone	63	U	63	2.0	ug/L			01/28/15 14:00	12.5
Dibromochloromethane	13	U	13	1.7	ug/L			01/28/15 14:00	12.5
1,2-Dibromoethane (EDB)	13	U	13	2.3	ug/L			01/28/15 14:00	12.5
<b>Chlorobenzene</b>	<b>1.8</b>	<b>J</b>	13	1.7	ug/L			01/28/15 14:00	12.5
1,1,1,2-Tetrachloroethane	13	U	13	3.5	ug/L			01/28/15 14:00	12.5
Ethylbenzene	13	U	13	2.8	ug/L			01/28/15 14:00	12.5
Xylenes, Total	38	U	38	6.1	ug/L			01/28/15 14:00	12.5
Styrene	13	U	13	1.2	ug/L			01/28/15 14:00	12.5
Bromoform	13	U	13	2.4	ug/L			01/28/15 14:00	12.5
1,1,2,2-Tetrachloroethane	13	U	13	2.5	ug/L			01/28/15 14:00	12.5
Acrylonitrile	250	U	250	6.8	ug/L			01/28/15 14:00	12.5
1,4-Dioxane	2500	U	2500	430	ug/L			01/28/15 14:00	12.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 135		01/28/15 14:00	12.5
Toluene-d8 (Surr)	98		71 - 118		01/28/15 14:00	12.5
4-Bromofluorobenzene (Surr)	101		70 - 118		01/28/15 14:00	12.5
Dibromofluoromethane (Surr)	119		70 - 128		01/28/15 14:00	12.5

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Client Sample ID: HD-CW-13-0/1-0**

**Date Collected: 01/20/15 07:37**

**Date Received: 01/21/15 10:10**

**Lab Sample ID: 180-40617-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	25	U	25	7.1	ug/L			01/28/15 14:24	25
<b>Vinyl chloride</b>	<b>23</b>	<b>J</b>	25	5.7	ug/L			01/28/15 14:24	25
Bromomethane	25	U	25	7.8	ug/L			01/28/15 14:24	25
Chloroethane	25	U	25	5.4	ug/L			01/28/15 14:24	25
<b>1,1-Dichloroethene</b>	<b>19</b>	<b>J</b>	25	7.4	ug/L			01/28/15 14:24	25
Acetone	130	U	130	63	ug/L			01/28/15 14:24	25
Carbon disulfide	25	U	25	5.3	ug/L			01/28/15 14:24	25
Methylene Chloride	25	U	25	3.1	ug/L			01/28/15 14:24	25
trans-1,2-Dichloroethene	25	U	25	4.2	ug/L			01/28/15 14:24	25
Methyl tert-butyl ether	25	U	25	4.6	ug/L			01/28/15 14:24	25
<b>1,1-Dichloroethane</b>	<b>8.7</b>	<b>J</b>	25	2.9	ug/L			01/28/15 14:24	25
<b>cis-1,2-Dichloroethene</b>	<b>1200</b>	<b>E</b>	25	5.9	ug/L			01/28/15 14:24	25
Bromochloromethane	25	U	25	4.5	ug/L			01/28/15 14:24	25
2-Butanone (MEK)	130	U	130	14	ug/L			01/28/15 14:24	25
Chloroform	25	U	25	4.3	ug/L			01/28/15 14:24	25
<b>1,1,1-Trichloroethane</b>	<b>39</b>		25	7.2	ug/L			01/28/15 14:24	25
Carbon tetrachloride	25	U	25	3.4	ug/L			01/28/15 14:24	25
Benzene	25	U	25	2.6	ug/L			01/28/15 14:24	25
1,2-Dichloroethane	25	U	25	5.3	ug/L			01/28/15 14:24	25
<b>Trichloroethene</b>	<b>540</b>		25	3.6	ug/L			01/28/15 14:24	25
1,2-Dichloropropane	25	U	25	2.4	ug/L			01/28/15 14:24	25
Bromodichloromethane	25	U	25	3.3	ug/L			01/28/15 14:24	25
cis-1,3-Dichloropropene	25	U	25	4.7	ug/L			01/28/15 14:24	25
4-Methyl-2-pentanone (MIBK)	130	U	130	13	ug/L			01/28/15 14:24	25
Toluene	25	U	25	3.8	ug/L			01/28/15 14:24	25
trans-1,3-Dichloropropene	25	U	25	3.7	ug/L			01/28/15 14:24	25
1,1,2-Trichloroethane	25	U	25	5.0	ug/L			01/28/15 14:24	25
<b>Tetrachloroethene</b>	<b>430</b>		25	3.7	ug/L			01/28/15 14:24	25
2-Hexanone	130	U	130	4.0	ug/L			01/28/15 14:24	25
Dibromochloromethane	25	U	25	3.4	ug/L			01/28/15 14:24	25
1,2-Dibromoethane (EDB)	25	U	25	4.5	ug/L			01/28/15 14:24	25
Chlorobenzene	25	U	25	3.4	ug/L			01/28/15 14:24	25
1,1,1,2-Tetrachloroethane	25	U	25	6.9	ug/L			01/28/15 14:24	25
Ethylbenzene	25	U	25	5.7	ug/L			01/28/15 14:24	25
Xylenes, Total	75	U	75	12	ug/L			01/28/15 14:24	25
Styrene	25	U	25	2.4	ug/L			01/28/15 14:24	25
Bromoform	25	U	25	4.8	ug/L			01/28/15 14:24	25
1,1,2,2-Tetrachloroethane	25	U	25	5.0	ug/L			01/28/15 14:24	25
Acrylonitrile	500	U	500	14	ug/L			01/28/15 14:24	25
1,4-Dioxane	5000	U	5000	860	ug/L			01/28/15 14:24	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 135		01/28/15 14:24	25
Toluene-d8 (Surr)	99		71 - 118		01/28/15 14:24	25
4-Bromofluorobenzene (Surr)	99		70 - 118		01/28/15 14:24	25
Dibromofluoromethane (Surr)	116		70 - 128		01/28/15 14:24	25

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Client Sample ID: HD-CW-15A-0/1-0**

**Date Collected: 01/20/15 08:10**

**Date Received: 01/21/15 10:10**

**Lab Sample ID: 180-40617-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	500	U	500	140	ug/L			01/28/15 15:13	500
Vinyl chloride	500	U	500	110	ug/L			01/28/15 15:13	500
Bromomethane	500	U	500	160	ug/L			01/28/15 15:13	500
Chloroethane	500	U	500	110	ug/L			01/28/15 15:13	500
<b>1,1-Dichloroethene</b>	<b>2300</b>		500	150	ug/L			01/28/15 15:13	500
Acetone	2500	U	2500	1300	ug/L			01/28/15 15:13	500
Carbon disulfide	500	U	500	110	ug/L			01/28/15 15:13	500
Methylene Chloride	500	U	500	63	ug/L			01/28/15 15:13	500
trans-1,2-Dichloroethene	500	U	500	85	ug/L			01/28/15 15:13	500
Methyl tert-butyl ether	500	U	500	92	ug/L			01/28/15 15:13	500
<b>1,1-Dichloroethane</b>	<b>130</b>	<b>J</b>	500	58	ug/L			01/28/15 15:13	500
<b>cis-1,2-Dichloroethene</b>	<b>11000</b>		500	120	ug/L			01/28/15 15:13	500
Bromochloromethane	500	U	500	90	ug/L			01/28/15 15:13	500
2-Butanone (MEK)	2500	U	2500	270	ug/L			01/28/15 15:13	500
Chloroform	500	U	500	85	ug/L			01/28/15 15:13	500
<b>1,1,1-Trichloroethane</b>	<b>13000</b>		500	140	ug/L			01/28/15 15:13	500
Carbon tetrachloride	500	U	500	68	ug/L			01/28/15 15:13	500
Benzene	500	U	500	53	ug/L			01/28/15 15:13	500
1,2-Dichloroethane	500	U	500	110	ug/L			01/28/15 15:13	500
<b>Trichloroethene</b>	<b>2600</b>		500	72	ug/L			01/28/15 15:13	500
1,2-Dichloropropane	500	U	500	47	ug/L			01/28/15 15:13	500
Bromodichloromethane	500	U	500	65	ug/L			01/28/15 15:13	500
cis-1,3-Dichloropropene	500	U	500	93	ug/L			01/28/15 15:13	500
4-Methyl-2-pentanone (MIBK)	2500	U	2500	260	ug/L			01/28/15 15:13	500
Toluene	500	U	500	75	ug/L			01/28/15 15:13	500
trans-1,3-Dichloropropene	500	U	500	74	ug/L			01/28/15 15:13	500
1,1,2-Trichloroethane	500	U	500	100	ug/L			01/28/15 15:13	500
<b>Tetrachloroethene</b>	<b>2700</b>		500	74	ug/L			01/28/15 15:13	500
2-Hexanone	2500	U	2500	80	ug/L			01/28/15 15:13	500
Dibromochloromethane	500	U	500	68	ug/L			01/28/15 15:13	500
1,2-Dibromoethane (EDB)	500	U	500	90	ug/L			01/28/15 15:13	500
Chlorobenzene	500	U	500	68	ug/L			01/28/15 15:13	500
1,1,1,2-Tetrachloroethane	500	U	500	140	ug/L			01/28/15 15:13	500
Ethylbenzene	500	U	500	110	ug/L			01/28/15 15:13	500
Xylenes, Total	1500	U	1500	240	ug/L			01/28/15 15:13	500
Styrene	500	U	500	48	ug/L			01/28/15 15:13	500
Bromoform	500	U	500	96	ug/L			01/28/15 15:13	500
1,1,2,2-Tetrachloroethane	500	U	500	100	ug/L			01/28/15 15:13	500
Acrylonitrile	10000	U	10000	270	ug/L			01/28/15 15:13	500
1,4-Dioxane	100000	U	100000	17000	ug/L			01/28/15 15:13	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		64 - 135		01/28/15 15:13	500
Toluene-d8 (Surr)	97		71 - 118		01/28/15 15:13	500
4-Bromofluorobenzene (Surr)	96		70 - 118		01/28/15 15:13	500
Dibromofluoromethane (Surr)	110		70 - 128		01/28/15 15:13	500



# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Client Sample ID: HD-CW-17-0/1-0**

**Date Collected: 01/20/15 07:43**

**Date Received: 01/21/15 10:10**

**Lab Sample ID: 180-40617-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	5.0	U	5.0	1.4	ug/L			01/28/15 15:37	5
Vinyl chloride	5.0	U	5.0	1.1	ug/L			01/28/15 15:37	5
Bromomethane	5.0	U	5.0	1.6	ug/L			01/28/15 15:37	5
Chloroethane	5.0	U	5.0	1.1	ug/L			01/28/15 15:37	5
<b>1,1-Dichloroethene</b>	<b>19</b>		5.0	1.5	ug/L			01/28/15 15:37	5
Acetone	25	U	25	13	ug/L			01/28/15 15:37	5
Carbon disulfide	5.0	U	5.0	1.1	ug/L			01/28/15 15:37	5
Methylene Chloride	5.0	U	5.0	0.63	ug/L			01/28/15 15:37	5
trans-1,2-Dichloroethene	5.0	U	5.0	0.85	ug/L			01/28/15 15:37	5
Methyl tert-butyl ether	5.0	U	5.0	0.92	ug/L			01/28/15 15:37	5
<b>1,1-Dichloroethane</b>	<b>4.4</b>	<b>J</b>	5.0	0.58	ug/L			01/28/15 15:37	5
<b>cis-1,2-Dichloroethene</b>	<b>250</b>	<b>E</b>	5.0	1.2	ug/L			01/28/15 15:37	5
Bromochloromethane	5.0	U	5.0	0.90	ug/L			01/28/15 15:37	5
2-Butanone (MEK)	25	U	25	2.7	ug/L			01/28/15 15:37	5
Chloroform	5.0	U	5.0	0.85	ug/L			01/28/15 15:37	5
<b>1,1,1-Trichloroethane</b>	<b>64</b>		5.0	1.4	ug/L			01/28/15 15:37	5
Carbon tetrachloride	5.0	U	5.0	0.68	ug/L			01/28/15 15:37	5
Benzene	5.0	U	5.0	0.53	ug/L			01/28/15 15:37	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			01/28/15 15:37	5
<b>Trichloroethene</b>	<b>240</b>	<b>E</b>	5.0	0.72	ug/L			01/28/15 15:37	5
1,2-Dichloropropane	5.0	U	5.0	0.47	ug/L			01/28/15 15:37	5
Bromodichloromethane	5.0	U	5.0	0.65	ug/L			01/28/15 15:37	5
cis-1,3-Dichloropropene	5.0	U	5.0	0.93	ug/L			01/28/15 15:37	5
4-Methyl-2-pentanone (MIBK)	25	U	25	2.6	ug/L			01/28/15 15:37	5
Toluene	5.0	U	5.0	0.75	ug/L			01/28/15 15:37	5
trans-1,3-Dichloropropene	5.0	U	5.0	0.74	ug/L			01/28/15 15:37	5
1,1,2-Trichloroethane	5.0	U	5.0	1.0	ug/L			01/28/15 15:37	5
<b>Tetrachloroethene</b>	<b>290</b>	<b>E</b>	5.0	0.74	ug/L			01/28/15 15:37	5
2-Hexanone	25	U	25	0.80	ug/L			01/28/15 15:37	5
Dibromochloromethane	5.0	U	5.0	0.68	ug/L			01/28/15 15:37	5
1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90	ug/L			01/28/15 15:37	5
Chlorobenzene	5.0	U	5.0	0.68	ug/L			01/28/15 15:37	5
1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4	ug/L			01/28/15 15:37	5
Ethylbenzene	5.0	U	5.0	1.1	ug/L			01/28/15 15:37	5
Xylenes, Total	15	U	15	2.4	ug/L			01/28/15 15:37	5
Styrene	5.0	U	5.0	0.48	ug/L			01/28/15 15:37	5
Bromoform	5.0	U	5.0	0.96	ug/L			01/28/15 15:37	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.0	ug/L			01/28/15 15:37	5
Acrylonitrile	100	U	100	2.7	ug/L			01/28/15 15:37	5
1,4-Dioxane	1000	U	1000	170	ug/L			01/28/15 15:37	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 135		01/28/15 15:37	5
Toluene-d8 (Surr)	100		71 - 118		01/28/15 15:37	5
4-Bromofluorobenzene (Surr)	96		70 - 118		01/28/15 15:37	5
Dibromofluoromethane (Surr)	113		70 - 128		01/28/15 15:37	5

TestAmerica Pittsburgh

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Client Sample ID: HD-CW-20-0/1-0**

**Date Collected: 01/20/15 07:30**

**Date Received: 01/21/15 10:10**

**Lab Sample ID: 180-40617-5**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	50	U	50	14	ug/L			01/28/15 16:25	50
Vinyl chloride	50	U	50	11	ug/L			01/28/15 16:25	50
Bromomethane	50	U	50	16	ug/L			01/28/15 16:25	50
Chloroethane	50	U	50	11	ug/L			01/28/15 16:25	50
<b>1,1-Dichloroethene</b>	<b>47</b>	<b>J</b>	50	15	ug/L			01/28/15 16:25	50
Acetone	250	U	250	130	ug/L			01/28/15 16:25	50
Carbon disulfide	50	U	50	11	ug/L			01/28/15 16:25	50
Methylene Chloride	50	U	50	6.3	ug/L			01/28/15 16:25	50
trans-1,2-Dichloroethene	50	U	50	8.5	ug/L			01/28/15 16:25	50
Methyl tert-butyl ether	50	U	50	9.2	ug/L			01/28/15 16:25	50
<b>1,1-Dichloroethane</b>	<b>36</b>	<b>J</b>	50	5.8	ug/L			01/28/15 16:25	50
<b>cis-1,2-Dichloroethene</b>	<b>510</b>		50	12	ug/L			01/28/15 16:25	50
Bromochloromethane	50	U	50	9.0	ug/L			01/28/15 16:25	50
2-Butanone (MEK)	250	U	250	27	ug/L			01/28/15 16:25	50
Chloroform	50	U	50	8.5	ug/L			01/28/15 16:25	50
<b>1,1,1-Trichloroethane</b>	<b>240</b>		50	14	ug/L			01/28/15 16:25	50
Carbon tetrachloride	50	U	50	6.8	ug/L			01/28/15 16:25	50
Benzene	50	U	50	5.3	ug/L			01/28/15 16:25	50
1,2-Dichloroethane	50	U	50	11	ug/L			01/28/15 16:25	50
<b>Trichloroethene</b>	<b>600</b>		50	7.2	ug/L			01/28/15 16:25	50
1,2-Dichloropropane	50	U	50	4.7	ug/L			01/28/15 16:25	50
Bromodichloromethane	50	U	50	6.5	ug/L			01/28/15 16:25	50
cis-1,3-Dichloropropene	50	U	50	9.3	ug/L			01/28/15 16:25	50
4-Methyl-2-pentanone (MIBK)	250	U	250	26	ug/L			01/28/15 16:25	50
Toluene	50	U	50	7.5	ug/L			01/28/15 16:25	50
trans-1,3-Dichloropropene	50	U	50	7.4	ug/L			01/28/15 16:25	50
1,1,2-Trichloroethane	50	U	50	10	ug/L			01/28/15 16:25	50
<b>Tetrachloroethene</b>	<b>360</b>		50	7.4	ug/L			01/28/15 16:25	50
2-Hexanone	250	U	250	8.0	ug/L			01/28/15 16:25	50
Dibromochloromethane	50	U	50	6.8	ug/L			01/28/15 16:25	50
1,2-Dibromoethane (EDB)	50	U	50	9.0	ug/L			01/28/15 16:25	50
Chlorobenzene	50	U	50	6.8	ug/L			01/28/15 16:25	50
1,1,1,2-Tetrachloroethane	50	U	50	14	ug/L			01/28/15 16:25	50
Ethylbenzene	50	U	50	11	ug/L			01/28/15 16:25	50
Xylenes, Total	150	U	150	24	ug/L			01/28/15 16:25	50
Styrene	50	U	50	4.8	ug/L			01/28/15 16:25	50
Bromoform	50	U	50	9.6	ug/L			01/28/15 16:25	50
1,1,2,2-Tetrachloroethane	50	U	50	10	ug/L			01/28/15 16:25	50
Acrylonitrile	1000	U	1000	27	ug/L			01/28/15 16:25	50
1,4-Dioxane	10000	U	10000	1700	ug/L			01/28/15 16:25	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		64 - 135		01/28/15 16:25	50
Toluene-d8 (Surr)	94		71 - 118		01/28/15 16:25	50
4-Bromofluorobenzene (Surr)	94		70 - 118		01/28/15 16:25	50
Dibromofluoromethane (Surr)	116		70 - 128		01/28/15 16:25	50

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

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

**Date Collected: 01/20/15 09:00**

**Date Received: 01/21/15 10:10**

**Lab Sample ID: 180-40617-6**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			01/28/15 14:49	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			01/28/15 14:49	1
Bromomethane	1.0	U	1.0	0.31	ug/L			01/28/15 14:49	1
Chloroethane	1.0	U	1.0	0.21	ug/L			01/28/15 14:49	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			01/28/15 14:49	1
Acetone	5.0	U	5.0	2.5	ug/L			01/28/15 14:49	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			01/28/15 14:49	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			01/28/15 14:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			01/28/15 14:49	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			01/28/15 14:49	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			01/28/15 14:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			01/28/15 14:49	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			01/28/15 14:49	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			01/28/15 14:49	1
Chloroform	1.0	U	1.0	0.17	ug/L			01/28/15 14:49	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			01/28/15 14:49	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			01/28/15 14:49	1
Benzene	1.0	U	1.0	0.11	ug/L			01/28/15 14:49	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/28/15 14:49	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			01/28/15 14:49	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			01/28/15 14:49	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			01/28/15 14:49	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			01/28/15 14:49	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			01/28/15 14:49	1
Toluene	1.0	U	1.0	0.15	ug/L			01/28/15 14:49	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			01/28/15 14:49	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			01/28/15 14:49	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/28/15 14:49	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			01/28/15 14:49	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			01/28/15 14:49	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			01/28/15 14:49	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/28/15 14:49	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			01/28/15 14:49	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			01/28/15 14:49	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			01/28/15 14:49	1
Styrene	1.0	U	1.0	0.097	ug/L			01/28/15 14:49	1
Bromoform	1.0	U	1.0	0.19	ug/L			01/28/15 14:49	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			01/28/15 14:49	1
Acrylonitrile	20	U	20	0.55	ug/L			01/28/15 14:49	1
1,4-Dioxane	200	U	200	34	ug/L			01/28/15 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		64 - 135		01/28/15 14:49	1
Toluene-d8 (Surr)	101		71 - 118		01/28/15 14:49	1
4-Bromofluorobenzene (Surr)	98		70 - 118		01/28/15 14:49	1
Dibromofluoromethane (Surr)	117		70 - 128		01/28/15 14:49	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Client Sample ID: HD-CW-13-0/1-0**

**Date Collected: 01/20/15 07:37**

**Date Received: 01/21/15 10:10**

**Lab Sample ID: 180-40617-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	50	U	50	14	ug/L			01/30/15 15:45	50
<b>Vinyl chloride</b>	<b>22</b>	<b>J</b>	50	11	ug/L			01/30/15 15:45	50
Bromomethane	50	U	50	16	ug/L			01/30/15 15:45	50
Chloroethane	50	U	50	11	ug/L			01/30/15 15:45	50
1,1-Dichloroethene	50	U	50	15	ug/L			01/30/15 15:45	50
Acetone	250	U	250	130	ug/L			01/30/15 15:45	50
Carbon disulfide	50	U	50	11	ug/L			01/30/15 15:45	50
Methylene Chloride	50	U	50	6.3	ug/L			01/30/15 15:45	50
trans-1,2-Dichloroethene	50	U	50	8.5	ug/L			01/30/15 15:45	50
Methyl tert-butyl ether	50	U	50	9.2	ug/L			01/30/15 15:45	50
1,1-Dichloroethane	50	U	50	5.8	ug/L			01/30/15 15:45	50
<b>cis-1,2-Dichloroethene</b>	<b>1200</b>		50	12	ug/L			01/30/15 15:45	50
Bromochloromethane	50	U	50	9.0	ug/L			01/30/15 15:45	50
2-Butanone (MEK)	250	U	250	27	ug/L			01/30/15 15:45	50
Chloroform	50	U	50	8.5	ug/L			01/30/15 15:45	50
<b>1,1,1-Trichloroethane</b>	<b>38</b>	<b>J</b>	50	14	ug/L			01/30/15 15:45	50
Carbon tetrachloride	50	U	50	6.8	ug/L			01/30/15 15:45	50
Benzene	50	U	50	5.3	ug/L			01/30/15 15:45	50
1,2-Dichloroethane	50	U	50	11	ug/L			01/30/15 15:45	50
<b>Trichloroethene</b>	<b>500</b>		50	7.2	ug/L			01/30/15 15:45	50
1,2-Dichloropropane	50	U	50	4.7	ug/L			01/30/15 15:45	50
Bromodichloromethane	50	U	50	6.5	ug/L			01/30/15 15:45	50
cis-1,3-Dichloropropene	50	U	50	9.3	ug/L			01/30/15 15:45	50
4-Methyl-2-pentanone (MIBK)	250	U	250	26	ug/L			01/30/15 15:45	50
Toluene	50	U	50	7.5	ug/L			01/30/15 15:45	50
trans-1,3-Dichloropropene	50	U	50	7.4	ug/L			01/30/15 15:45	50
1,1,2-Trichloroethane	50	U	50	10	ug/L			01/30/15 15:45	50
<b>Tetrachloroethene</b>	<b>360</b>		50	7.4	ug/L			01/30/15 15:45	50
2-Hexanone	250	U	250	8.0	ug/L			01/30/15 15:45	50
Dibromochloromethane	50	U	50	6.8	ug/L			01/30/15 15:45	50
1,2-Dibromoethane (EDB)	50	U	50	9.0	ug/L			01/30/15 15:45	50
Chlorobenzene	50	U	50	6.8	ug/L			01/30/15 15:45	50
1,1,1,2-Tetrachloroethane	50	U	50	14	ug/L			01/30/15 15:45	50
Ethylbenzene	50	U	50	11	ug/L			01/30/15 15:45	50
Xylenes, Total	150	U	150	24	ug/L			01/30/15 15:45	50
Styrene	50	U	50	4.8	ug/L			01/30/15 15:45	50
Bromoform	50	U	50	9.6	ug/L			01/30/15 15:45	50
1,1,2,2-Tetrachloroethane	50	U	50	10	ug/L			01/30/15 15:45	50
Acrylonitrile	1000	U	1000	27	ug/L			01/30/15 15:45	50
1,4-Dioxane	10000	U	10000	1700	ug/L			01/30/15 15:45	50
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	100		64 - 135					01/30/15 15:45	50
Toluene-d8 (Surr)	95		71 - 118					01/30/15 15:45	50
4-Bromofluorobenzene (Surr)	92		70 - 118					01/30/15 15:45	50
Dibromofluoromethane (Surr)	119		70 - 128					01/30/15 15:45	50

# Client Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Client Sample ID: HD-CW-17-0/1-0**

**Date Collected: 01/20/15 07:43**

**Date Received: 01/21/15 10:10**

**Lab Sample ID: 180-40617-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	20	U	20	5.7	ug/L			01/30/15 16:10	20
Vinyl chloride	20	U	20	4.5	ug/L			01/30/15 16:10	20
Bromomethane	20	U	20	6.3	ug/L			01/30/15 16:10	20
Chloroethane	20	U	20	4.3	ug/L			01/30/15 16:10	20
<b>1,1-Dichloroethene</b>	<b>22</b>		20	5.9	ug/L			01/30/15 16:10	20
Acetone	100	U	100	50	ug/L			01/30/15 16:10	20
Carbon disulfide	20	U	20	4.2	ug/L			01/30/15 16:10	20
Methylene Chloride	20	U	20	2.5	ug/L			01/30/15 16:10	20
trans-1,2-Dichloroethene	20	U	20	3.4	ug/L			01/30/15 16:10	20
Methyl tert-butyl ether	20	U	20	3.7	ug/L			01/30/15 16:10	20
<b>1,1-Dichloroethane</b>	<b>4.6</b>	<b>J</b>	20	2.3	ug/L			01/30/15 16:10	20
<b>cis-1,2-Dichloroethene</b>	<b>260</b>		20	4.7	ug/L			01/30/15 16:10	20
Bromochloromethane	20	U	20	3.6	ug/L			01/30/15 16:10	20
2-Butanone (MEK)	100	U	100	11	ug/L			01/30/15 16:10	20
Chloroform	20	U	20	3.4	ug/L			01/30/15 16:10	20
<b>1,1,1-Trichloroethane</b>	<b>70</b>		20	5.7	ug/L			01/30/15 16:10	20
Carbon tetrachloride	20	U	20	2.7	ug/L			01/30/15 16:10	20
Benzene	20	U	20	2.1	ug/L			01/30/15 16:10	20
1,2-Dichloroethane	20	U	20	4.2	ug/L			01/30/15 16:10	20
<b>Trichloroethene</b>	<b>230</b>		20	2.9	ug/L			01/30/15 16:10	20
1,2-Dichloropropane	20	U	20	1.9	ug/L			01/30/15 16:10	20
Bromodichloromethane	20	U	20	2.6	ug/L			01/30/15 16:10	20
cis-1,3-Dichloropropene	20	U	20	3.7	ug/L			01/30/15 16:10	20
4-Methyl-2-pentanone (MIBK)	100	U	100	11	ug/L			01/30/15 16:10	20
Toluene	20	U	20	3.0	ug/L			01/30/15 16:10	20
trans-1,3-Dichloropropene	20	U	20	3.0	ug/L			01/30/15 16:10	20
1,1,2-Trichloroethane	20	U	20	4.0	ug/L			01/30/15 16:10	20
<b>Tetrachloroethene</b>	<b>290</b>		20	3.0	ug/L			01/30/15 16:10	20
2-Hexanone	100	U	100	3.2	ug/L			01/30/15 16:10	20
Dibromochloromethane	20	U	20	2.7	ug/L			01/30/15 16:10	20
1,2-Dibromoethane (EDB)	20	U	20	3.6	ug/L			01/30/15 16:10	20
Chlorobenzene	20	U	20	2.7	ug/L			01/30/15 16:10	20
1,1,1,2-Tetrachloroethane	20	U	20	5.5	ug/L			01/30/15 16:10	20
Ethylbenzene	20	U	20	4.5	ug/L			01/30/15 16:10	20
Xylenes, Total	60	U	60	9.8	ug/L			01/30/15 16:10	20
Styrene	20	U	20	1.9	ug/L			01/30/15 16:10	20
Bromoform	20	U	20	3.8	ug/L			01/30/15 16:10	20
1,1,2,2-Tetrachloroethane	20	U	20	4.0	ug/L			01/30/15 16:10	20
Acrylonitrile	400	U	400	11	ug/L			01/30/15 16:10	20
1,4-Dioxane	4000	U	4000	690	ug/L			01/30/15 16:10	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 135		01/30/15 16:10	20
Toluene-d8 (Surr)	94		71 - 118		01/30/15 16:10	20
4-Bromofluorobenzene (Surr)	96		70 - 118		01/30/15 16:10	20
Dibromofluoromethane (Surr)	119		70 - 128		01/30/15 16:10	20

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-CW-9-0/1-0

Date Collected: 01/20/15 07:25

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	6.6	B	0.10	0.0062	mg/L			01/21/15 15:17	1
Chloride	240		5.0	0.98	mg/L			01/21/15 15:33	5
Sulfate	37		1.0	0.21	mg/L			01/21/15 15:17	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-CW-13-0/1-0

Date Collected: 01/20/15 07:37

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	8.5	B	0.10	0.0062	mg/L			01/21/15 15:48	1
Chloride	350		5.0	0.98	mg/L			01/21/15 16:03	5
Sulfate	37		1.0	0.21	mg/L			01/21/15 15:48	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-CW-15A-0/1-0

Date Collected: 01/20/15 08:10

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.3	B	0.10	0.0062	mg/L			01/21/15 16:19	1
Chloride	110		1.0	0.20	mg/L			01/21/15 16:19	1
Sulfate	30		1.0	0.21	mg/L			01/21/15 16:19	1



# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-CW-17-0/1-0

Date Collected: 01/20/15 07:43

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.1	B	0.10	0.0062	mg/L			01/21/15 17:05	1
Chloride	190		1.0	0.20	mg/L			01/21/15 17:05	1
Sulfate	74		1.0	0.21	mg/L			01/21/15 17:05	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-CW-20-0/1-0

Date Collected: 01/20/15 07:30

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.9	B	0.10	0.0062	mg/L			01/21/15 17:35	1
Chloride	170		1.0	0.20	mg/L			01/21/15 17:35	1
Sulfate	30		1.0	0.21	mg/L			01/21/15 17:35	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

Client Sample ID: HD-CW-9-0/1-0

Date Collected: 01/20/15 07:25

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	120000	B	100	2.8	ug/L		01/26/15 09:18	01/29/15 16:34	1
Potassium	30000	B	100	5.8	ug/L		01/26/15 09:18	01/30/15 11:53	1
Magnesium	27000	B	100	1.2	ug/L		01/26/15 09:18	01/29/15 16:34	1
Sodium	73000	B	100	3.8	ug/L		01/26/15 09:18	01/30/15 11:53	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

Client Sample ID: HD-CW-13-0/1-0

Date Collected: 01/20/15 07:37

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	150000	B	100	2.8	ug/L		01/26/15 09:18	01/29/15 16:38	1
Potassium	30000	B	100	5.8	ug/L		01/26/15 09:18	01/30/15 11:57	1
Magnesium	25000	B	100	1.2	ug/L		01/26/15 09:18	01/29/15 16:38	1
Sodium	87000	B	100	3.8	ug/L		01/26/15 09:18	01/30/15 11:57	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

Client Sample ID: HD-CW-15A-0/1-0

Date Collected: 01/20/15 08:10

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	72000	B	100	2.8	ug/L		01/26/15 09:18	01/29/15 16:42	1
Potassium	8000	B	100	5.8	ug/L		01/26/15 09:18	01/30/15 12:01	1
Magnesium	7400	B	100	1.2	ug/L		01/26/15 09:18	01/29/15 16:42	1
Sodium	46000	B	100	3.8	ug/L		01/26/15 09:18	01/30/15 12:01	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

Client Sample ID: HD-CW-17-0/1-0

Date Collected: 01/20/15 07:43

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	130000	B	100	2.8	ug/L		01/26/15 09:18	01/29/15 16:46	1
Potassium	13000	B	100	5.8	ug/L		01/26/15 09:18	01/30/15 12:05	1
Magnesium	14000	B	100	1.2	ug/L		01/26/15 09:18	01/29/15 16:46	1
Sodium	65000	B	100	3.8	ug/L		01/26/15 09:18	01/30/15 12:05	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

Client Sample ID: HD-CW-20-0/1-0

Date Collected: 01/20/15 07:30

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	96000	B	100	2.8	ug/L		01/26/15 09:18	01/29/15 16:51	1
Potassium	6800	B	100	5.8	ug/L		01/26/15 09:18	01/30/15 12:10	1
Magnesium	19000	B	100	1.2	ug/L		01/26/15 09:18	01/29/15 16:51	1
Sodium	51000	B	100	3.8	ug/L		01/26/15 09:18	01/30/15 12:10	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## General Chemistry

Client Sample ID: HD-CW-9-0/1-0

Date Collected: 01/20/15 07:25

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	260	B	5.0	0.41	mg/L			01/27/15 05:37	1
Bicarbonate Alkalinity as CaCO3	260	B	5.0	0.41	mg/L			01/27/15 05:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			01/27/15 05:37	1



# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## General Chemistry

Client Sample ID: HD-CW-13-0/1-0

Date Collected: 01/20/15 07:37

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	300	B	5.0	0.41	mg/L			01/27/15 05:37	1
Bicarbonate Alkalinity as CaCO3	300	B	5.0	0.41	mg/L			01/27/15 05:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			01/27/15 05:37	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## General Chemistry

Client Sample ID: HD-CW-15A-0/1-0

Date Collected: 01/20/15 08:10

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	160	B	5.0	0.41	mg/L			01/27/15 05:37	1
Bicarbonate Alkalinity as CaCO3	160	B	5.0	0.41	mg/L			01/27/15 05:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			01/27/15 05:37	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## General Chemistry

Client Sample ID: HD-CW-17-0/1-0

Date Collected: 01/20/15 07:43

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	250	B	5.0	0.41	mg/L			01/27/15 05:37	1
Bicarbonate Alkalinity as CaCO3	250	B	5.0	0.41	mg/L			01/27/15 05:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			01/27/15 05:37	1

# Client Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## General Chemistry

Client Sample ID: HD-CW-20-0/1-0

Date Collected: 01/20/15 07:30

Date Received: 01/21/15 10:10

Lab Sample ID: 180-40617-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	200	B	5.0	0.41	mg/L			01/27/15 05:37	1
Bicarbonate Alkalinity as CaCO3	200	B	5.0	0.41	mg/L			01/27/15 05:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			01/27/15 05:37	1

## Default Detection Limits

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

### 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

### Method: 300.0 - Anions, Ion Chromatography

Analyte	RL	MDL	Units	Method
Chloride	1.0	0.20	mg/L	300.0
Nitrate as N	0.10	0.0062	mg/L	300.0
Sulfate	1.0	0.21	mg/L	300.0

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

Analyte	RL	MDL	Units	Method
Calcium	100	2.8	ug/L	6020A

# Default Detection Limits

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

Analyte	RL	MDL	Units	Method
Magnesium	100	1.2	ug/L	6020A
Potassium	100	5.8	ug/L	6020A
Sodium	100	3.8	ug/L	6020A

## General Chemistry

Analyte	RL	MDL	Units	Method
Bicarbonate Alkalinity as CaCO <sub>3</sub>	5.0	0.41	mg/L	SM 2320B
Carbonate Alkalinity as CaCO <sub>3</sub>	5.0	0.41	mg/L	SM 2320B
Total Alkalinity as CaCO <sub>3</sub> to pH 4.5	5.0	0.41	mg/L	SM 2320B

# Surrogate Summary

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

**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)
180-40617-1	HD-CW-9-0/1-0	96	98	101	119
180-40617-2	HD-CW-13-0/1-0	95	99	99	116
180-40617-2 - DL	HD-CW-13-0/1-0	100	95	92	119
180-40617-3	HD-CW-15A-0/1-0	98	97	96	110
180-40617-4	HD-CW-17-0/1-0	96	100	96	113
180-40617-4 - DL	HD-CW-17-0/1-0	101	94	96	119
180-40617-5	HD-CW-20-0/1-0	95	94	94	116
180-40617-6	HD-QC6-0/1-2	98	101	98	117
LCS 180-131906/8	Lab Control Sample	90	96	94	102
LCS 180-132193/7	Lab Control Sample	82	88	90	93
MB 180-131906/5	Method Blank	90	102	101	106
MB 180-132193/4	Method Blank	97	96	90	112

**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: 180-40617-1

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

**Lab Sample ID: MB 180-131906/5**

**Matrix: Water**

**Analysis Batch: 131906**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloromethane	1.0	U	1.0	0.28	ug/L			01/28/15 10:35	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			01/28/15 10:35	1
Bromomethane	1.0	U	1.0	0.31	ug/L			01/28/15 10:35	1
Chloroethane	1.0	U	1.0	0.21	ug/L			01/28/15 10:35	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			01/28/15 10:35	1
Acetone	5.0	U	5.0	2.5	ug/L			01/28/15 10:35	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			01/28/15 10:35	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			01/28/15 10:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			01/28/15 10:35	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			01/28/15 10:35	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			01/28/15 10:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			01/28/15 10:35	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			01/28/15 10:35	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			01/28/15 10:35	1
Chloroform	1.0	U	1.0	0.17	ug/L			01/28/15 10:35	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			01/28/15 10:35	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			01/28/15 10:35	1
Benzene	1.0	U	1.0	0.11	ug/L			01/28/15 10:35	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/28/15 10:35	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			01/28/15 10:35	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			01/28/15 10:35	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			01/28/15 10:35	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			01/28/15 10:35	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			01/28/15 10:35	1
Toluene	1.0	U	1.0	0.15	ug/L			01/28/15 10:35	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			01/28/15 10:35	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			01/28/15 10:35	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/28/15 10:35	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			01/28/15 10:35	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			01/28/15 10:35	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			01/28/15 10:35	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/28/15 10:35	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			01/28/15 10:35	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			01/28/15 10:35	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			01/28/15 10:35	1
Styrene	1.0	U	1.0	0.097	ug/L			01/28/15 10:35	1
Bromoform	1.0	U	1.0	0.19	ug/L			01/28/15 10:35	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			01/28/15 10:35	1
Acrylonitrile	20	U	20	0.55	ug/L			01/28/15 10:35	1
1,4-Dioxane	200	U	200	34	ug/L			01/28/15 10:35	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	90		64 - 135		01/28/15 10:35	1
Toluene-d8 (Surr)	102		71 - 118		01/28/15 10:35	1
4-Bromofluorobenzene (Surr)	101		70 - 118		01/28/15 10:35	1
Dibromofluoromethane (Surr)	106		70 - 128		01/28/15 10:35	1

TestAmerica Pittsburgh



# QC Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Lab Sample ID: LCS 180-131906/8**

**Matrix: Water**

**Analysis Batch: 131906**

**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	7.25		ug/L		73	50 - 139
Vinyl chloride	10.0	8.63		ug/L		86	53 - 138
Bromomethane	10.0	10.7		ug/L		107	33 - 150
Chloroethane	10.0	8.87		ug/L		89	36 - 142
1,1-Dichloroethene	10.0	9.30		ug/L		93	65 - 136
Acetone	20.0	16.9		ug/L		85	22 - 150
Carbon disulfide	10.0	10.3		ug/L		103	54 - 132
Methylene Chloride	10.0	9.00		ug/L		90	63 - 129
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	73 - 126
Methyl tert-butyl ether	10.0	9.14		ug/L		91	64 - 123
1,1-Dichloroethane	10.0	9.56		ug/L		96	73 - 126
cis-1,2-Dichloroethene	10.0	9.96		ug/L		100	70 - 120
Bromochloromethane	10.0	9.94		ug/L		99	70 - 127
2-Butanone (MEK)	20.0	15.7		ug/L		79	39 - 138
Chloroform	10.0	9.92		ug/L		99	72 - 127
1,1,1-Trichloroethane	10.0	11.6		ug/L		116	63 - 133
Carbon tetrachloride	10.0	12.3		ug/L		123	55 - 150
Benzene	10.0	9.83		ug/L		98	80 - 120
1,2-Dichloroethane	10.0	9.32		ug/L		93	68 - 132
Trichloroethene	10.0	10.9		ug/L		109	73 - 120
1,2-Dichloropropane	10.0	8.59		ug/L		86	76 - 124
Bromodichloromethane	10.0	9.52		ug/L		95	66 - 130
cis-1,3-Dichloropropene	10.0	9.78		ug/L		98	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	15.3		ug/L		76	45 - 145
Toluene	10.0	10.2		ug/L		102	80 - 123
trans-1,3-Dichloropropene	10.0	10.3		ug/L		103	65 - 125
1,1,2-Trichloroethane	10.0	8.96		ug/L		90	77 - 127
Tetrachloroethene	10.0	10.2		ug/L		102	70 - 135
2-Hexanone	20.0	12.4		ug/L		62	25 - 132
Dibromochloromethane	10.0	10.1		ug/L		101	60 - 140
1,2-Dibromoethane (EDB)	10.0	9.41		ug/L		94	74 - 123
Chlorobenzene	10.0	10.6		ug/L		106	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.3		ug/L		103	63 - 140
Ethylbenzene	10.0	9.82		ug/L		98	72 - 126
Xylenes, Total	20.0	19.6		ug/L		98	76 - 128
Styrene	10.0	9.44		ug/L		94	71 - 127
Bromoform	10.0	9.13		ug/L		91	46 - 150
1,1,2,2-Tetrachloroethane	10.0	8.62		ug/L		86	62 - 125
1,4-Dioxane	200	140	J	ug/L		70	10 - 160

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	90		64 - 135
Toluene-d8 (Surr)	96		71 - 118
4-Bromofluorobenzene (Surr)	94		70 - 118
Dibromofluoromethane (Surr)	102		70 - 128

# QC Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Lab Sample ID: MB 180-132193/4**

**Matrix: Water**

**Analysis Batch: 132193**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloromethane	1.0	U	1.0	0.28	ug/L			01/30/15 10:58	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			01/30/15 10:58	1
Bromomethane	1.0	U	1.0	0.31	ug/L			01/30/15 10:58	1
Chloroethane	1.0	U	1.0	0.21	ug/L			01/30/15 10:58	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			01/30/15 10:58	1
Acetone	5.0	U	5.0	2.5	ug/L			01/30/15 10:58	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			01/30/15 10:58	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			01/30/15 10:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			01/30/15 10:58	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			01/30/15 10:58	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			01/30/15 10:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			01/30/15 10:58	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			01/30/15 10:58	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			01/30/15 10:58	1
Chloroform	1.0	U	1.0	0.17	ug/L			01/30/15 10:58	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			01/30/15 10:58	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			01/30/15 10:58	1
Benzene	1.0	U	1.0	0.11	ug/L			01/30/15 10:58	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			01/30/15 10:58	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			01/30/15 10:58	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			01/30/15 10:58	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			01/30/15 10:58	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			01/30/15 10:58	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			01/30/15 10:58	1
Toluene	1.0	U	1.0	0.15	ug/L			01/30/15 10:58	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			01/30/15 10:58	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			01/30/15 10:58	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			01/30/15 10:58	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			01/30/15 10:58	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			01/30/15 10:58	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			01/30/15 10:58	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			01/30/15 10:58	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			01/30/15 10:58	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			01/30/15 10:58	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			01/30/15 10:58	1
Styrene	1.0	U	1.0	0.097	ug/L			01/30/15 10:58	1
Bromoform	1.0	U	1.0	0.19	ug/L			01/30/15 10:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			01/30/15 10:58	1
Acrylonitrile	20	U	20	0.55	ug/L			01/30/15 10:58	1
1,4-Dioxane	200	U	200	34	ug/L			01/30/15 10:58	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	97		64 - 135		01/30/15 10:58	1
Toluene-d8 (Surr)	96		71 - 118		01/30/15 10:58	1
4-Bromofluorobenzene (Surr)	90		70 - 118		01/30/15 10:58	1
Dibromofluoromethane (Surr)	112		70 - 128		01/30/15 10:58	1

TestAmerica Pittsburgh

# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Lab Sample ID: LCS 180-132193/7**

**Matrix: Water**

**Analysis Batch: 132193**

**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	7.72		ug/L		77	50 - 139
Vinyl chloride	10.0	8.54		ug/L		85	53 - 138
Bromomethane	10.0	9.06		ug/L		91	33 - 150
Chloroethane	10.0	8.18		ug/L		82	36 - 142
1,1-Dichloroethene	10.0	9.99		ug/L		100	65 - 136
Acetone	20.0	17.5		ug/L		88	22 - 150
Carbon disulfide	10.0	10.4		ug/L		104	54 - 132
Methylene Chloride	10.0	9.10		ug/L		91	63 - 129
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	73 - 126
Methyl tert-butyl ether	10.0	8.58		ug/L		86	64 - 123
1,1-Dichloroethane	10.0	9.29		ug/L		93	73 - 126
cis-1,2-Dichloroethene	10.0	9.94		ug/L		99	70 - 120
Bromochloromethane	10.0	9.56		ug/L		96	70 - 127
2-Butanone (MEK)	20.0	16.2		ug/L		81	39 - 138
Chloroform	10.0	9.59		ug/L		96	72 - 127
1,1,1-Trichloroethane	10.0	11.1		ug/L		111	63 - 133
Carbon tetrachloride	10.0	11.6		ug/L		116	55 - 150
Benzene	10.0	9.54		ug/L		95	80 - 120
1,2-Dichloroethane	10.0	9.10		ug/L		91	68 - 132
Trichloroethene	10.0	10.2		ug/L		102	73 - 120
1,2-Dichloropropane	10.0	8.18		ug/L		82	76 - 124
Bromodichloromethane	10.0	9.20		ug/L		92	66 - 130
cis-1,3-Dichloropropene	10.0	9.97		ug/L		100	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	14.2		ug/L		71	45 - 145
Toluene	10.0	9.70		ug/L		97	80 - 123
trans-1,3-Dichloropropene	10.0	10.3		ug/L		103	65 - 125
1,1,2-Trichloroethane	10.0	9.37		ug/L		94	77 - 127
Tetrachloroethene	10.0	9.98		ug/L		100	70 - 135
2-Hexanone	20.0	11.7		ug/L		59	25 - 132
Dibromochloromethane	10.0	10.6		ug/L		106	60 - 140
1,2-Dibromoethane (EDB)	10.0	8.66		ug/L		87	74 - 123
Chlorobenzene	10.0	10.1		ug/L		101	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.3		ug/L		103	63 - 140
Ethylbenzene	10.0	10.0		ug/L		100	72 - 126
Xylenes, Total	20.0	19.5		ug/L		97	76 - 128
Styrene	10.0	9.17		ug/L		92	71 - 127
Bromoform	10.0	9.59		ug/L		96	46 - 150
1,1,2,2-Tetrachloroethane	10.0	8.53		ug/L		85	62 - 125
1,4-Dioxane	200	136	J	ug/L		68	10 - 160

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	82		64 - 135
Toluene-d8 (Surr)	88		71 - 118
4-Bromofluorobenzene (Surr)	90		70 - 118
Dibromofluoromethane (Surr)	93		70 - 128

# QC Sample Results

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 180-131352/6**

**Matrix: Water**

**Analysis Batch: 131352**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Nitrate as N	0.00966	J	0.10	0.0062	mg/L			01/21/15 12:01	1
Chloride	1.0	U	1.0	0.20	mg/L			01/21/15 12:01	1
Sulfate	1.0	U	1.0	0.21	mg/L			01/21/15 12:01	1

**Lab Sample ID: LCS 180-131352/5**

**Matrix: Water**

**Analysis Batch: 131352**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.8		mg/L		106	90 - 110
Sulfate	50.0	53.0		mg/L		106	90 - 110

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

**Lab Sample ID: MB 180-131708/1-A**

**Matrix: Water**

**Analysis Batch: 132177**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 131708**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Magnesium	100	U	100	1.2	ug/L		01/26/15 09:18	01/29/15 16:21	1

**Lab Sample ID: MB 180-131708/1-A**

**Matrix: Water**

**Analysis Batch: 132322**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 131708**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Calcium	15.8	J	100	2.8	ug/L		01/26/15 09:18	01/30/15 11:40	1
Potassium	42.0	J	100	5.8	ug/L		01/26/15 09:18	01/30/15 11:40	1
Sodium	78.3	J	100	3.8	ug/L		01/26/15 09:18	01/30/15 11:40	1

**Lab Sample ID: LCS 180-131708/2-A**

**Matrix: Water**

**Analysis Batch: 132177**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 131708**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	50000	45400	B	ug/L		91	80 - 120

**Lab Sample ID: LCS 180-131708/2-A**

**Matrix: Water**

**Analysis Batch: 132322**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 131708**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50000	42700		ug/L		85	80 - 120

# QC Sample Results

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 180-131782/2**

**Matrix: Water**

**Analysis Batch: 131782**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Alkalinity as CaCO3 to pH 4.5	3.96	J	5.0	0.41	mg/L			01/27/15 05:37	1
Bicarbonate Alkalinity as CaCO3	3.96	J	5.0	0.41	mg/L			01/27/15 05:37	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			01/27/15 05:37	1

**Lab Sample ID: LCS 180-131782/1**

**Matrix: Water**

**Analysis Batch: 131782**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

# QC Association Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## GC/MS VOA

### Analysis Batch: 131906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-40617-1	HD-CW-9-0/1-0	Total/NA	Water	8260C	
180-40617-2	HD-CW-13-0/1-0	Total/NA	Water	8260C	
180-40617-3	HD-CW-15A-0/1-0	Total/NA	Water	8260C	
180-40617-4	HD-CW-17-0/1-0	Total/NA	Water	8260C	
180-40617-5	HD-CW-20-0/1-0	Total/NA	Water	8260C	
180-40617-6	HD-QC6-0/1-2	Total/NA	Water	8260C	
LCS 180-131906/8	Lab Control Sample	Total/NA	Water	8260C	
MB 180-131906/5	Method Blank	Total/NA	Water	8260C	

### Analysis Batch: 132193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-40617-2 - DL	HD-CW-13-0/1-0	Total/NA	Water	8260C	
180-40617-4 - DL	HD-CW-17-0/1-0	Total/NA	Water	8260C	
LCS 180-132193/7	Lab Control Sample	Total/NA	Water	8260C	
MB 180-132193/4	Method Blank	Total/NA	Water	8260C	

## HPLC/IC

### Analysis Batch: 131352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-40617-1	HD-CW-9-0/1-0	Total/NA	Water	300.0	
180-40617-1	HD-CW-9-0/1-0	Total/NA	Water	300.0	
180-40617-2	HD-CW-13-0/1-0	Total/NA	Water	300.0	
180-40617-2	HD-CW-13-0/1-0	Total/NA	Water	300.0	
180-40617-3	HD-CW-15A-0/1-0	Total/NA	Water	300.0	
180-40617-4	HD-CW-17-0/1-0	Total/NA	Water	300.0	
180-40617-5	HD-CW-20-0/1-0	Total/NA	Water	300.0	
LCS 180-131352/5	Lab Control Sample	Total/NA	Water	300.0	
MB 180-131352/6	Method Blank	Total/NA	Water	300.0	

## Metals

### Prep Batch: 131708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-40617-1	HD-CW-9-0/1-0	Total/NA	Water	3005A	
180-40617-2	HD-CW-13-0/1-0	Total/NA	Water	3005A	
180-40617-3	HD-CW-15A-0/1-0	Total/NA	Water	3005A	
180-40617-4	HD-CW-17-0/1-0	Total/NA	Water	3005A	
180-40617-5	HD-CW-20-0/1-0	Total/NA	Water	3005A	
LCS 180-131708/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 180-131708/1-A	Method Blank	Total Recoverable	Water	3005A	

### Analysis Batch: 132177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-40617-1	HD-CW-9-0/1-0	Total/NA	Water	6020A	131708
180-40617-2	HD-CW-13-0/1-0	Total/NA	Water	6020A	131708
180-40617-3	HD-CW-15A-0/1-0	Total/NA	Water	6020A	131708
180-40617-4	HD-CW-17-0/1-0	Total/NA	Water	6020A	131708
180-40617-5	HD-CW-20-0/1-0	Total/NA	Water	6020A	131708
CRI 180-132177/38	DL		Water	6020A	

TestAmerica Pittsburgh

# QC Association Summary

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## Metals (Continued)

### Analysis Batch: 132177 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CRI 180-132177/8	DL		Water	6020A	
ICSA 180-132177/9	ICS		Water	6020A	
ICSAB 180-132177/10	ICS		Water	6020A	
LCS 180-131708/2-A	Lab Control Sample	Total Recoverable	Water	6020A	131708
MB 180-131708/1-A	Method Blank	Total Recoverable	Water	6020A	131708

### Analysis Batch: 132322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-40617-1	HD-CW-9-0/1-0	Total/NA	Water	6020A	131708
180-40617-2	HD-CW-13-0/1-0	Total/NA	Water	6020A	131708
180-40617-3	HD-CW-15A-0/1-0	Total/NA	Water	6020A	131708
180-40617-4	HD-CW-17-0/1-0	Total/NA	Water	6020A	131708
180-40617-5	HD-CW-20-0/1-0	Total/NA	Water	6020A	131708
CRI 180-132322/32	DL		Water	6020A	
CRI 180-132322/8	DL		Water	6020A	
ICSA 180-132322/9	ICS		Water	6020A	
ICSAB 180-132322/10	ICS		Water	6020A	
LCS 180-131708/2-A	Lab Control Sample	Total Recoverable	Water	6020A	131708
MB 180-131708/1-A	Method Blank	Total Recoverable	Water	6020A	131708

## General Chemistry

### Analysis Batch: 131782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-40617-1	HD-CW-9-0/1-0	Total/NA	Water	SM 2320B	
180-40617-2	HD-CW-13-0/1-0	Total/NA	Water	SM 2320B	
180-40617-3	HD-CW-15A-0/1-0	Total/NA	Water	SM 2320B	
180-40617-4	HD-CW-17-0/1-0	Total/NA	Water	SM 2320B	
180-40617-5	HD-CW-20-0/1-0	Total/NA	Water	SM 2320B	
LCS 180-131782/1	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 180-131782/2	Method Blank	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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

**Lab Sample ID: 180-40617-1**

**Date Collected: 01/20/15 07:25**

**Matrix: Water**

**Date Received: 01/21/15 10:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		12.5	5 mL	5 mL	131906	01/28/15 14:00	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	300.0		1	1 mL		131352	01/21/15 15:17	CMR	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Analysis	300.0		5	1 mL		131352	01/21/15 15:33	CMR	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132177	01/29/15 16:34	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132322	01/30/15 11:53	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	131782	01/27/15 05:37	CLL	TAL PIT
		Instrument ID: NOEQUIP								

**Client Sample ID: HD-CW-13-0/1-0**

**Lab Sample ID: 180-40617-2**

**Date Collected: 01/20/15 07:37**

**Matrix: Water**

**Date Received: 01/21/15 10:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	5 mL	5 mL	131906	01/28/15 14:24	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	8260C	DL	50	5 mL	5 mL	132193	01/30/15 15:45	DLF	TAL PIT
		Instrument ID: CHHP5								
Total/NA	Analysis	300.0		1	1 mL		131352	01/21/15 15:48	CMR	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Analysis	300.0		5	1 mL		131352	01/21/15 16:03	CMR	TAL PIT
		Instrument ID: CHIC2100A								
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132177	01/29/15 16:38	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132322	01/30/15 11:57	CNF	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	131782	01/27/15 05:37	CLL	TAL PIT
		Instrument ID: NOEQUIP								

**Client Sample ID: HD-CW-15A-0/1-0**

**Lab Sample ID: 180-40617-3**

**Date Collected: 01/20/15 08:10**

**Matrix: Water**

**Date Received: 01/21/15 10:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		500	5 mL	5 mL	131906	01/28/15 15:13	DLF	TAL PIT

TestAmerica Pittsburgh



# Lab Chronicle

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

**Client Sample ID: HD-CW-15A-0/1-0**

**Lab Sample ID: 180-40617-3**

Date Collected: 01/20/15 08:10

Matrix: Water

Date Received: 01/21/15 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		500	5 mL	5 mL	131906	01/28/15 15:13	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		131352	01/21/15 16:19	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132177	01/29/15 16:42	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132322	01/30/15 12:01	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	131782	01/27/15 05:37	CLL	TAL PIT
	Instrument ID: NOEQUIP									

**Client Sample ID: HD-CW-17-0/1-0**

**Lab Sample ID: 180-40617-4**

Date Collected: 01/20/15 07:43

Matrix: Water

Date Received: 01/21/15 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	5 mL	5 mL	131906	01/28/15 15:37	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	8260C	DL	20	5 mL	5 mL	132193	01/30/15 16:10	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		131352	01/21/15 17:05	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132177	01/29/15 16:46	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132322	01/30/15 12:05	CNF	TAL PIT
	Instrument ID: X									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	131782	01/27/15 05:37	CLL	TAL PIT
	Instrument ID: NOEQUIP									

**Client Sample ID: HD-CW-20-0/1-0**

**Lab Sample ID: 180-40617-5**

Date Collected: 01/20/15 07:30

Matrix: Water

Date Received: 01/21/15 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	5 mL	5 mL	131906	01/28/15 16:25	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		131352	01/21/15 17:35	CMR	TAL PIT
	Instrument ID: CHIC2100A									
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT

TestAmerica Pittsburgh

# Lab Chronicle

Client: Groundwater Sciences Corporation  
 Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

**Client Sample ID: HD-CW-20-0/1-0**

**Lab Sample ID: 180-40617-5**

**Date Collected: 01/20/15 07:30**

**Matrix: Water**

**Date Received: 01/21/15 10:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6020A		1	50 mL	50 mL	132177	01/29/15 16:51	CNF	TAL PIT
Instrument ID: X										
Total/NA	Prep	3005A			50 mL	50 mL	131708	01/26/15 09:18	RJR	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	132322	01/30/15 12:10	CNF	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	131782	01/27/15 05:37	CLL	TAL PIT
Instrument ID: NOEQUIP										

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

**Lab Sample ID: 180-40617-6**

**Date Collected: 01/20/15 09:00**

**Matrix: Water**

**Date Received: 01/21/15 10:10**

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	131906	01/28/15 14:49	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: Prep

RJR = Ron Rosenbaum

Batch Type: Analysis

CLL = Cheryl Loheyde

CMR = Carl Reagle

CNF = Caitlin Ferguson

DLF = Donald Ferguson

# Certification Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

## 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	04-30-15

# Method Summary

Client: Groundwater Sciences Corporation  
Project/Site: Harley Davidson

TestAmerica Job ID: 180-40617-1

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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
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020A	Metals (ICP/MS)	SW846	TAL PIT
SM 2320B	Alkalinity	SM	TAL PIT

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**Protocol References:**

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.  
SM = "Standard Methods For The Examination Of Water And Wastewater",  
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: 180-40617-1

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<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Matrix</b>	<b>Collected</b>	<b>Received</b>
180-40617-1	HD-CW-9-0/1-0	Water	01/20/15 07:25	01/21/15 10:10
180-40617-2	HD-CW-13-0/1-0	Water	01/20/15 07:37	01/21/15 10:10
180-40617-3	HD-CW-15A-0/1-0	Water	01/20/15 08:10	01/21/15 10:10
180-40617-4	HD-CW-17-0/1-0	Water	01/20/15 07:43	01/21/15 10:10
180-40617-5	HD-CW-20-0/1-0	Water	01/20/15 07:30	01/21/15 10:10
180-40617-6	HD-QC6-0/1-2	Water	01/20/15 09:00	01/21/15 10:10

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHHP5 Analysis Batch Number: 128329

Lab Sample ID: IC 180-128329/7 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/14 14:33 Lab File ID: 51215007.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.72	Split Peak	fergusond	12/15/14 16:41
1,1-Dichloroethene	3.40	Split Peak	fergusond	12/15/14 16:41
Iodomethane	3.66	Split Peak	fergusond	12/15/14 16:41
Methylene Chloride	4.18	Split Peak	fergusond	12/15/14 16:41

Lab Sample ID: IC 180-128329/8 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/14 14:57 Lab File ID: 51215008.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	2.29	Peak Tail	fergusond	12/15/14 16:39
1,4-Dioxane	8.09	Peak Tail	fergusond	12/16/14 08:50

Lab Sample ID: ICIS 180-128329/9 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/14 15:21 Lab File ID: 51215009.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acrolein	3.29	Peak Tail	fergusond	12/15/14 16:37

Lab Sample ID: IC 180-128329/11 Client Sample ID: \_\_\_\_\_

Date Analyzed: 12/15/14 16:09 Lab File ID: 51215011.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.08	Peak Tail	fergusond	12/15/14 16:48

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHHP5 Analysis Batch Number: 131906Lab Sample ID: LCS 180-131906/8 Client Sample ID: \_\_\_\_\_Date Analyzed: 01/28/15 12:00 Lab File ID: 50128008.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.06	Peak Tail	fergusond	01/28/15 12:42

Lab Sample ID: 180-40617-4 Client Sample ID: HD-CW-17-0/1-0Date Analyzed: 01/28/15 15:37 Lab File ID: 50128017.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.33	Split Peak	fergusond	01/28/15 16:34

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
icccv_01146	01/22/15	01/21/15	DI Water, Lot 0	15 mL	ICPRIMARYSTA_00006	0.3 mL	Chloride	50 ug/mL
							Nitrate as N	2.5 ug/mL
							Sulfate	50 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Chloride	2500 ug/mL
							Nitrate as N	125 ug/mL
							Sulfate	2500 ug/mL
icicv_01178	01/22/15	01/21/15	DI Water, Lot NA	5 mL	ICSECONDSTD1_00004	0.6 mL	Chloride	60 ug/mL
							Nitrate as N	3 ug/mL
							Sulfate	60 ug/mL
.ICSECONDSTD1_00004	03/01/15	inorganic ventures, Lot H2-MEB512078			(Purchased Reagent)		Chloride	500 ug/mL
							Nitrate as N	25 ug/mL
							Sulfate	500 ug/mL
ICSTDL2_00144	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00189	0.1 mL	Bromide	0.2 ug/mL
							Chloride	1 ug/mL
							Fluoride	0.05 ug/mL
							Nitrate as N	0.05 ug/mL
							Orthophosphate as P	0.05 ug/mL
							Sulfate	1 ug/mL
Nitrite as N	0.05 ug/mL							
.ICSTDL6_00189	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Sulfate	2500 ug/mL
							Nitrite as N	125 ug/mL
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
ICSTDL3_00182	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00189	0.5 mL	Bromide	1 ug/mL
							Chloride	5 ug/mL
							Fluoride	0.25 ug/mL
							Nitrate as N	0.25 ug/mL
							Orthophosphate as P	0.25 ug/mL
							Sulfate	5 ug/mL
Nitrite as N	0.25 ug/mL							
.ICSTDL6_00189	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
..ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626		(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL4_00121	01/13/15	01/12/15	DI Water, Lot na	5 mL	ICSTDL7_00124	0.5 mL	Bromide	2 ug/mL
							Chloride	10 ug/mL
							Fluoride	0.5 ug/mL
							Nitrate as N	0.5 ug/mL
							Orthophosphate as P	0.5 ug/mL
							Sulfate	10 ug/mL
.ICSTDL7_00124	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
..ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
..ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626		(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL5_00120	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICSTDL7_00124	1 mL	Bromide	4 ug/mL
							Chloride	20 ug/mL
							Fluoride	1 ug/mL
							Nitrate as N	1 ug/mL
							Orthophosphate as P	1 ug/mL
							Sulfate	20 ug/mL
.ICSTDL7_00124	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
..ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)	Nitrite as N	125 ug/mL
ICSTDL6_00189	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
.ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)	Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)	Nitrite as N	125 ug/mL
ICSTDL7_00124	01/13/15	01/12/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
					ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
.ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)	Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)	Nitrite as N	125 ug/mL
ICSTDL8_00095	01/13/15	01/12/15	DI Water, Lot SUPER Q	10 mL	ICPRIMARYSTA_00006	0.6 mL	Bromide	30 ug/mL
							Chloride	150 ug/mL
							Fluoride	7.5 ug/mL
							Nitrate as N	7.5 ug/mL
							Orthophosphate as P	7.5 ug/mL
							Sulfate	150 ug/mL
					ICPRIMARYSTDB_00008	0.6 mL	Nitrite as N	7.5 ug/mL
.ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)	Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)	Nitrite as N	125 ug/mL
ICSTDL9_00100	01/13/15	01/12/15	DI Water, Lot SUPER Q	10 mL	ICPRIMARYSTA_00006	0.8 mL	Bromide	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloride	200 ug/mL
							Fluoride	10 ug/mL
							Nitrate as N	10 ug/mL
							Orthophosphate as P	10 ug/mL
							Sulfate	200 ug/mL
.ICPRIMARYSTA_00006	10/08/15		HIGH-PURITY STDS, Lot 1427624		ICPRIMARYSTDB_00008	0.8 mL	Nitrite as N	10 ug/mL
							(Purchased Reagent)	
							Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15		HIGH-PURITY STDS, Lot 1427626				Nitrite as N	125 ug/mL
							(Purchased Reagent)	
MCCV1X_00072	02/22/15	01/22/15	2% Nitric Acid, Lot 1241747	500 mL	MCALSPECAREV_00005	10 mL	Calcium	50 ppm
							Magnesium	50 ppm
							Potassium	50 ppm
							Sodium	50 ppm
.MCALSPECAREV_00005	05/01/15		Inorganic Ventures, Lot F2-MEB524026				Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
							(Purchased Reagent)	
MCR1X_00061	02/26/15	01/26/15	HNO3, Lot 1191081	250 mL	MMSCRI-1B_00004	1 mL	Calcium	0.1 ppm
							Magnesium	0.1 ppm
							Potassium	0.1 ppm
							Sodium	0.1 ppm
.MMSCRI-1B_00004	10/01/15		Inorganic Ventures, Lot H2-MEB549023				Calcium	25 ppm
							Magnesium	25 ppm
							Potassium	25 ppm
							Sodium	25 ppm
							(Purchased Reagent)	
MICSABX_00066	02/16/15	01/16/15	2% Nitric Acid, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
					M6020ICS-0B_00006	1 mL	Ag	0.02 ppm
							As	0.02 ppm
							Cd	0.02 ppm
							Co	0.02 ppm
							Cr	0.02 ppm
							Cu	0.02 ppm
							Mn	0.0225 ppm
							Ni	0.02 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MMSICSAB-1_00007	0.2 mL	Zn	0.025 ppm
							Ba	0.02 ppm
							Be	0.02 ppm
							Pb	0.02 ppm
							Sr	0.025 ppm
					MMSICSAB-2_00006	0.2 mL	Tl	0.02 ppm
							V	0.02 ppm
							B	0.05 ppm
							Sb	0.02 ppm
							Se	0.05 ppm
.M6020ICS-0A_00005	09/01/15		Inorganic Ventures, Lot G2-MEB476152MCA		(Purchased Reagent)		Si	0.5 ppm
							Sn	0.1 ppm
							Al	1000 ppm
							Calcium	1000 ppm
							Fe	1000 ppm
							Magnesium	1000 ppm
							Mo	20 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
							Ti	20 ppm
.M6020ICS-0B_00006	09/01/15		Inorganic Ventures, Lot G2-MEB463151		(Purchased Reagent)		Ag	2 ppm
							As	2 ppm
							Cd	2 ppm
							Co	2 ppm
							Cr	2 ppm
							Cu	2 ppm
							Mn	2.25 ppm
							Ni	2 ppm
							Zn	2.5 ppm
							.MMSICSAB-1_00007	05/01/15
Be	10 ppm							
Pb	10 ppm							
Sr	12.5 ppm							
Tl	10 ppm							
V	10 ppm							
.MMSICSAB-2_00006	05/01/15		Inorganic Ventures, Lot G2-MEB467043		(Purchased Reagent)		B	25 ppm
							Sb	10 ppm
							Se	25 ppm
							Si	250 ppm
							Sn	50 ppm
MICSAX_00062	02/16/15	01/16/15	DI Water, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration							
					Reagent ID	Volume Added									
.M6020ICS-0A_00005	09/01/15		Inorganic Ventures, Lot G2-MEB476152MCA		(Purchased Reagent)		Ti	2 ppm							
							Al	1000 ppm							
							Calcium	1000 ppm							
							Fe	1000 ppm							
							Magnesium	1000 ppm							
							Mo	20 ppm							
							Potassium	1000 ppm							
Sodium	1000 ppm														
MICVX_00028	01/24/15	12/24/14	2% Nitric Acid, Lot 25106	250 mg/L	MICPMSICV_00018	10 mg/L	Calcium	40 mg/L							
							Magnesium	40 mg/L							
							Potassium	40 mg/L							
							Sodium	40 mg/L							
							.MICPMSICV_00018	11/30/15		SPEX CertiPrep, Lot 7-230WL		(Purchased Reagent)		Calcium	1000 ppm
														Magnesium	1000 ppm
														Potassium	1000 ppm
Sodium	1000 ppm														
MSTD2X_00041	02/22/15	01/22/15	DI Water, Lot 1241717	250 mL	MCALSPECAREV_00005	10 mg/L	Calcium	100 ppm							
							Magnesium	100 ppm							
							Potassium	100 ppm							
							Sodium	100 ppm							
.MCALSPECAREV_00005	05/01/15		Inorganic Ventures, Lot F2-MEB524026		(Purchased Reagent)		Calcium	2500 ppm							
							Magnesium	2500 ppm							
							Potassium	2500 ppm							
							Sodium	2500 ppm							
MTAPITICPMS_00018	04/01/15		INORGANIC VENTURES, Lot G2-MEB506053		(Purchased Reagent)		Ag	5 ug/mL							
							Al	200 ug/mL							
							As	4 ug/mL							
							B	100 ug/mL							
							Ba	200 ug/mL							
							Be	5 ug/mL							
							Cd	5 ug/mL							
							Co	50 ug/mL							
							Cr	20 ug/mL							
							Cu	25 ug/mL							
							Fe	100 ug/mL							
							Mn	50 ug/mL							
							Ni	50 ug/mL							
							Pb	2 ug/mL							
							Se	1 ug/mL							
							Sr	100 ug/mL							
							Tl	5 ug/mL							
							V	50 ug/mL							
							Zn	50 ug/mL							
MTAPITMSA_00023	12/01/15		INORGANIC VENTURES, Lot H2-MEB532044		(Purchased Reagent)		Calcium	5000 ug/mL							
							Magnesium	5000 ug/mL							

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	5000 ug/mL
							Sodium	5000 ug/mL
<b>MTAPITMSC_00029</b>	12/01/15		Inorganic Ventures, Lot H2-MEB532046		(Purchased Reagent)		Mo	100 ug/mL
							Sb	50 ug/mL
							Si	1000 ug/mL
							SiO2	2140 ug/mL
							Sn	200 ug/mL
							Ti	100 ug/mL
<b>VOA8260INT_00026</b>	01/10/15	12/10/14	Methanol, Lot 85233	10 mL	VOA8260INTRES_00048	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_00048	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
<b>VOA8260SURR_00028</b>	01/10/15	12/10/14	Methanol, Lot 85233	100 mL	VOA8260SURRES_00073	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_00073	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
<b>VOA8260SURR_00029</b>	01/30/15	12/30/14	Methanol, Lot 85233	100 mL	VOA8260SURRES_00075	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_00075	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
<b>VOA8260VOA2ND_00099</b>	01/29/15	01/22/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00051	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00096	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.: 180-40617-1

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_00051	11/30/15		Restek, Lot A099261			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOA2ND_00096	01/31/15	12/31/14	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00026	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA2_00026	02/28/16		Restek, Lot A093733		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOA8260VOAPRI_00092	12/18/14	12/11/14	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00077	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.: 180-40617-1

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_00090	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.: 180-40617-1

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_00077	09/30/16		Restek, Lot A0105755			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOAPRI_00090	01/02/15	12/02/14	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00033	0.2 mL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					VOA8260MEGA1_00017	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,1-Dichloropropene	200 ug/mL
							1,2,3-Trichlorobenzene	200 ug/mL
							1,2,3-Trichloropropane	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2,4-Trimethylbenzene	200 ug/mL
							1,2-Dibromo-3-Chloropropane	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,3,5-Trimethylbenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dichloropropane	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							2,2-Dichloropropane	200 ug/mL
							2-Chlorotoluene	200 ug/mL
							2-Methyl-2-propanol	2000 ug/mL
							3-Chloro-1-propene	200 ug/mL
							4-Chlorotoluene	200 ug/mL
							4-Isopropyltoluene	200 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromobenzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Cyclohexane	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Dibromomethane	200 ug/mL
							Ethyl ether	200 ug/mL
							Ethyl methacrylate	200 ug/mL
							Ethylbenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexane	200 ug/mL
							Iodomethane	200 ug/mL
							Isobutyl alcohol	5000 ug/mL
							Isopropylbenzene	200 ug/mL
							m-Xylene & p-Xylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylcyclohexane	200 ug/mL
							Methylene Chloride	200 ug/mL
							n-Butylbenzene	200 ug/mL
							n-Heptane	200 ug/mL
							N-Propylbenzene	200 ug/mL
							Naphthalene	200 ug/mL
							o-Xylene	200 ug/mL
							sec-Butylbenzene	200 ug/mL
							Styrene	200 ug/mL
							tert-Butylbenzene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Tetrahydrofuran	400 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							trans-1,4-Dichloro-2-butene	200 ug/mL
							Trichloroethene	200 ug/mL
..VOA8260KET1ST_00033	02/28/16		Restek, Lot A093365			(Purchased Reagent)	2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
..VOA8260MEGA1_00017	02/28/16		Restek, Lot A093581			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane (EDB)	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,1-Dichloropropene	2000 ug/mL
							1,2,3-Trichlorobenzene	2000 ug/mL
							1,2,3-Trichloropropane	2000 ug/mL
							1,2,4-Trichlorobenzene	2000 ug/mL
							1,2,4-Trimethylbenzene	2000 ug/mL
							1,2-Dibromo-3-Chloropropane	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichlorobenzene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,3,5-Trimethylbenzene	2000 ug/mL
							1,3-Dichlorobenzene	2000 ug/mL
							1,3-Dichloropropane	2000 ug/mL
							1,4-Dichlorobenzene	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							2,2-Dichloropropane	2000 ug/mL
							2-Chlorotoluene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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	20000 ug/mL
							3-Chloro-1-propene	2000 ug/mL
							4-Chlorotoluene	2000 ug/mL
							4-Isopropyltoluene	2000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromobenzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Cyclohexane	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Dibromomethane	2000 ug/mL
							Ethyl ether	2000 ug/mL
							Ethyl methacrylate	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Hexachlorobutadiene	2000 ug/mL
							Hexane	2000 ug/mL
							Iodomethane	2000 ug/mL
							Isobutyl alcohol	50000 ug/mL
							Isopropylbenzene	2000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methyl acetate	10000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylcyclohexane	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							n-Butylbenzene	2000 ug/mL
							n-Heptane	2000 ug/mL
							N-Propylbenzene	2000 ug/mL
							Naphthalene	2000 ug/mL
							o-Xylene	2000 ug/mL
							sec-Butylbenzene	2000 ug/mL
							Styrene	2000 ug/mL
							tert-Butylbenzene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Tetrahydrofuran	4000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							trans-1,4-Dichloro-2-butene	2000 ug/mL
							Trichloroethene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration					
					Reagent ID	Volume Added							
VOA8260VOAPRI_00097	01/28/15	01/21/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00081	0.1 mL	Bromomethane	25 ug/mL					
							Chloroethane	25 ug/mL					
							Chloromethane	25 ug/mL					
							Vinyl chloride	25 ug/mL					
					VOA8260VOAPRI_00094						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_00081	09/30/16		Restek, Lot A0105755		(Purchased Reagent)		Bromomethane	2000 ug/mL					
							Chloroethane	2000 ug/mL					
							Chloromethane	2000 ug/mL					
							Vinyl chloride	2000 ug/mL					
.VOA8260VOAPRI_00094	01/31/15	12/31/14	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00025	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL					
							1,1,1-Trichloroethane	200 ug/mL					
							1,1,2,2-Tetrachloroethane	200 ug/mL					
							1,1,2-Trichloroethane	200 ug/mL					
							1,1-Dichloroethane	200 ug/mL					
							1,1-Dichloroethene	200 ug/mL					
							1,2-Dibromoethane (EDB)	200 ug/mL					
1,2-Dichloroethane	200 ug/mL												

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA1_00025	02/28/16		Restek, Lot A093581			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOAACROPRI_00004	12/31/14	12/01/14	Methanol, Lot 34562	50 mL	VOAACRORES_00060	0.0625 mL	Acrolein	25 ug/mL
.VOAACRORES_00060	02/28/15		Restek, Lot A0106504		(Purchased Reagent)		Acrolein	20000 ug/mL
VOAKETONEPRI_00003	02/20/15	01/20/15	Methanol, Lot 85233	50 mL	VOA8260KET1ST_00034	0.125 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_00034	02/28/16		Restek, Lot A093365		(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
voaWEEpri Res_00001	12/28/14	11/28/14	Methanol, Lot 85233	25 mL	VOARESEE1ST_00015	0.125 mL	1,2-dichloro-4-(trifluoromethyl)benzene	25 ug/mL
							2,3,6-Trichlorotoluene	25 ug/mL
							2,4,5-Trichlorotoluene	25 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_00015	02/28/15		Restek, Lot A097285		(Purchased Reagent)		1,2-dichloro-4-(trifluoromethyl)benzene	5000 ug/mL
							2,3,6-Trichlorotoluene	5000 ug/mL
							2,4,5-Trichlorotoluene	5000 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
voaWket2nd Re_00001	01/29/15	12/29/14	Methanol, Lot 85233	50 mL	VOA8260KET2ND_00036	0.125 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_00036	02/28/16		Restek, Lot A0101295		(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
voaWKet2ndRes_00005	12/24/14	11/24/14	Methanol, Lot 85233	50 mL	VOA8260KET2ND_00037	0.125 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_00037	02/28/16		Restek, Lot A0101295		(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
voaWVA pri Re_00005	12/31/14	12/01/14	Methanol, Lot 62345	20 mL	VOA8260VARES_00046	0.125 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00046	04/30/15		Restek, Lot A0106957		(Purchased Reagent)		Vinyl acetate	4000 ug/mL
voaWVOA 2nd R_00001	02/05/15	01/29/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00080	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00100	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-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

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00080	11/30/15		Restek, Lot A099261			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOA2ND_00100	02/27/15	01/27/15	Methanol, Lot 85233	10 mL	VOA8260KET2ND_00039	0.16 mL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					VOA8260MEGA2_00030	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260KET2ND_00039	01/31/18		Restek, Lot A0108157			(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.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration		
					Reagent ID	Volume Added				
..VOA8260MEGA2_00030	02/28/16		Restek, Lot A093733			(Purchased Reagent)	Acetone	12500 ug/mL		
							1,1,1,2-Tetrachloroethane	2000 ug/mL		
							1,1,1-Trichloroethane	2000 ug/mL		
							1,1,2,2-Tetrachloroethane	2000 ug/mL		
							1,1,2-Trichloroethane	2000 ug/mL		
							1,1-Dichloroethane	2000 ug/mL		
							1,1-Dichloroethene	2000 ug/mL		
							1,2-Dibromoethane (EDB)	2000 ug/mL		
							1,2-Dichloroethane	2000 ug/mL		
							1,2-Dichloropropane	2000 ug/mL		
							1,4-Dioxane	40000 ug/mL		
							Acrylonitrile	20000 ug/mL		
							Benzene	2000 ug/mL		
							Bromochloromethane	2000 ug/mL		
							Bromodichloromethane	2000 ug/mL		
							Bromoform	2000 ug/mL		
							Carbon disulfide	2000 ug/mL		
							Carbon tetrachloride	2000 ug/mL		
							Chlorobenzene	2000 ug/mL		
							Chloroform	2000 ug/mL		
							cis-1,2-Dichloroethene	2000 ug/mL		
							cis-1,3-Dichloropropene	2000 ug/mL		
							Dibromochloromethane	2000 ug/mL		
Ethylbenzene	2000 ug/mL									
Methyl tert-butyl ether	2000 ug/mL									
Methylene Chloride	2000 ug/mL									
Styrene	2000 ug/mL									
Tetrachloroethene	2000 ug/mL									
Toluene	2000 ug/mL									
trans-1,2-Dichloroethene	2000 ug/mL									
trans-1,3-Dichloropropene	2000 ug/mL									
Trichloroethene	2000 ug/mL									
Xylenes, Total	4000 ug/mL									
voaWVOA-Pri_R_00001	02/05/15	01/29/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00082	0.1 mL	Bromomethane	25 ug/mL		
							Chloroethane	25 ug/mL		
							Chloromethane	25 ug/mL		
							Vinyl chloride	25 ug/mL		
							VOA8260VOAPRI_00098	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-Trichloroethane	25 ug/mL
									1,1-Dichloroethane	25 ug/mL
									1,1-Dichloroethene	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00082	09/30/16		Restek, Lot A0105755			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
.VOA8260VOAPRI_00098	02/27/15	01/27/15	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00035	0.2 mL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					VOA8260MEGA1_00024	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260KET1ST_00035	02/28/16		Restek, Lot A093365			(Purchased Reagent)	2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
..VOA8260MEGA1_00024	02/28/16		Restek, Lot A093581			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
<b>WALK125PPMCCV_00080</b>	07/21/15	01/21/15	DI Water, Lot SUPERQ	1000 mL	WNa2CO3P_00007	0.125 g	Total Alkalinity as CaCO3 to pH 4.5	125 mg/L
.WNa2CO3P_00007	07/09/18		Fisher Scientific, Lot 138124		(Purchased Reagent)		Total Alkalinity as CaCO3 to pH 4.5	1 g/g
<b>WALK250PPMPi_00089</b>	07/20/15	01/20/15	DI Water, Lot Super Q	1000 mL	WNa2CO3P_00007	0.25 g	Total Alkalinity as CaCO3 to pH 4.5	250 mg/L
.WNa2CO3P_00007	07/09/18		Fisher Scientific, Lot 138124		(Purchased Reagent)		Total Alkalinity as CaCO3 to pH 4.5	1 g/g

Reagent

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**ICPRIMARYSTA\_00006**

# Certificate of Analysis

## Product Description:

Name: IC Spike  
Part Number: SM-606-005 Solution A  
Lot Number: 1427624  
Matrix: H<sub>2</sub>O  
Purity: 99.1+%

## Certified Values:

Component	Certified Value (µg/mL)	NIST SRM ID	NIST SRM Lot #
Bromide	500 ± 5	3184	020701
Chloride	2500 ± 25	3182	060925
Fluoride	125.00 ± 1.25	3183	050721
NO <sub>3</sub> as N	125.00 ± 1.25	3185	050517
PO <sub>4</sub> as P	125.00 ± 1.25	3186	090723
Sulfate	2500 ± 25	3181	080603

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via ion chromatography (IC) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

## Preparation Information:

Custom standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by IC for conformity prior to use. The matrix is 18 megohm deionized water.

## Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

### a. Standard Weight and Analytical Balance

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

### b. Volumetric Device

The calibration of volumetric vessels is checked annually using the ASTM method E542.

Lot No.: 1427624  
Rev. No.: 3.2.1  
Page 1 of 2



c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**

The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions.

**Packaging and Storage Conditions:**

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

**Refer to Material Safety Datasheet (MSDS) for hazardous information.**

**Expiration Information:**

The expiry date is guaranteed to be valid for twelve months from the shipping date provided.

Preparation Date: **October 3, 2014**

Shipped Date: **October 8, 2014**

Expiration Date: **October 8, 2015**

Certificate Issue Date: **October 8, 2014**

**Quality Information:**



ISO/IEC 17025:2005 Accreditation  
Certificate Number AT-1529

A handwritten signature in cursive script that reads "Angel Sellers".

Angel Sellers,  
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Lot No.: 1427624  
Rev. No.: 3.2.1  
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High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

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**ICPRIMARYSTDB\_00008**

# Certificate of Analysis

## Product Description:

Name:	IC Spike	Source Material:	Sodium Nitrite
Part Number:	SM-606-005 Solution B	Material Purity:	100%
Lot Number:	1427626	Matrix:	H <sub>2</sub> O

## Certified Value:

NO<sub>2</sub> as N      125.00 µg/mL ± 1.25 µg/mL

The Certified value is based on gravimetric preparation and verified against a second source or independent lot via ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

## Preparation Information:

The highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was prepared using methods developed at NIST for the preparation of SRM Spectrometric Standard Solutions. The matrix is 18 megohm deionized water.

## Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**

The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**

The Calibration Standard is traceable to a second source or independent lot.

## Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

**Refer to Material Safety Datasheet (MSDS) for hazardous information.**

### Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided.

Preparation Date: October 3, 2014  
Shipped Date: October 8, 2014  
Expiration Date: October 8, 2015  
Certificate Issue Date: October 8, 2014

### Quality Information:



ISO/IEC 17025:2005 Accreditation  
Certificate Number AT-1529

A handwritten signature in cursive script that reads "Angel Sellers".

Angel Sellers,  
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Lot No.: 1427626  
Rev. No.: 3.2.1  
Page 2 of 2

Reagent

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**ICSECONDDSTD1\_00004**

**1.0 INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0 DESCRIPTION OF CRM**      Ion Chromatography      Custom Second Source Solution

Catalog No.:                      TA-17

Lot Number:                        H2-MEB512078

Matrix:                                H2O

500 mg/L ea:  
 Chloride,                              Sulfate,

100 mg/L ea:  
 Bromide,

25 mg/L ea:  
 Fluoride,                              Nitrate as N,                              o-Phosphate as P

**Second Source:** Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

ION	CERTIFIED VALUE	ION	CERTIFIED VALUE	ION	CERTIFIED VALUE
Bromide	100.0 ± 0.6 mg/L	Chloride	500.1 ± 3.1 mg/L	Fluoride	25.00 ± 0.13 mg/L
Nitrate as N	25.00 ± 0.15 mg/L	o-Phosphate as P	25.00 ± 0.20 mg/L	Sulfate	500.0 ± 2.6 mg/L

**Certified Density:**                      1.002 g/mL (measured at 20 ± 1°C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

**4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS**

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

#### 4.1 ASSAY INFORMATION

ION	METHOD	NIST SRM#	SRM LOT#
Bromide	IC Assay	3184	020701
Bromide	Volhard	999b	999b
Chloride	IC Assay	3182	060925
Chloride	Volhard	999b	999b
Fluoride	Calculated		See Sec. 4.2
Fluoride	IC Assay	3183	050721
Nitrate_as_N	Calculated		See Sec. 4.2
Nitrate_as_N	IC Assay	3185	050517
oPhosphate_as_P	Calculated		See Sec. 4.2
oPhosphate_as_P	IC Assay	3186	090723
Sulfate	Calculated		See Sec. 4.2
Sulfate	IC Assay	3181	080603

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 **Chromatogram - N/A**

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep tightly sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . Do Not pipette from the container. Do Not return portions removed from pipetting to container.

**Element Specific Information** - For specific information regarding any element: Contact technical staff.

8.0 **HAZARDOUS INFORMATION** - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 **HOMOGENEITY** - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

**10.0 QUALITY STANDARD DOCUMENTATION**

- 10.1 ISO 9001 Quality Management System Registration  
- SAI Global File Number 010105
- 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"  
- Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission  
- Domestic Licensing of Production and Utilization Facilities
- 10.5 10CFR21 - Nuclear Regulatory Commission  
- Reporting Defects and Non-Compliance

**11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY**

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: February 05, 2014

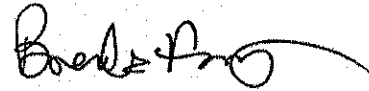
Expiration Date:

**EXPIRES**

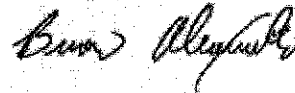
01<sup>st</sup> 2015

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

Certificate Prepared By: Brenda Francis  
Product Documentation Technician



Certificate Approved By: Brian Alexander  
PhD., Technical Process Director



Certifying Officer: Paul Gaines  
PhD., Senior Technical Director





Reagent

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**M6020ICS-0A\_00005**

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 **DESCRIPTION OF CRM**      **Stock Solution**

Catalog No.:                      6020ICS-0A

Lot Number:                        **G2-MEB476152MCA**

Matrix:                                1.4% HNO<sub>3</sub>(v/v)

10,000 µg/mL ea:

Chloride,

2,000 µg/mL ea:

C,

1,000 µg/mL ea:

Al,                      Ca,                      Fe,                      K,                      Mg,                      Na,                      P,                      S,

20 µg/mL ea:

Mo,                      Ti

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	1,002 ± 6 µg/mL	Calcium, Ca	1,002 ± 6 µg/mL	Carbon, C	2,004 ± 13 µg/mL
Chloride, Chloride	10,020.0 ± 50.0 µg/mL	Iron, Fe	1,002 ± 7 µg/mL	Magnesium, Mg	1,002 ± 4 µg/mL
Molybdenum, Mo	20.04 ± 0.14 µg/mL	Phosphorus, P	1,002 ± 7 µg/mL	Potassium, K	1,002 ± 4 µg/mL
Sodium, Na	1,002 ± 7 µg/mL	Sulfur, S	1,002 ± 5 µg/mL	Titanium, Ti	20.04 ± 0.13 µg/mL

**Certified Density:**      1.034    g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.
- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

#### 4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Gravimetric		See Sec. 4.2
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	010728
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84k	84k
Ti	ICP Assay	3162a	060808

- 4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).
- 4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.
- 4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL

Custom-Grade solutions are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

<u>s</u> Al	<u>M</u> Dy < 0.000100	<u>O</u> Li 0.002000	<u>M</u> Pr < 0.000100	<u>M</u> Te < 0.012007
<u>M</u> Sb < 0.000600	<u>M</u> Er < 0.000100	<u>M</u> Lu < 0.000100	<u>M</u> Re < 0.000100	<u>M</u> Tb < 0.000100
<u>O</u> As < 0.020000	<u>M</u> Eu < 0.000100	<u>s</u> Mg	<u>M</u> Rh < 0.000100	<u>M</u> Tl < 0.000100
<u>O</u> Ba < 0.000200	<u>M</u> Gd < 0.000100	<u>O</u> Mn 0.003000	<u>M</u> Rb < 0.020012	<u>M</u> Th < 0.000100
<u>O</u> Be < 0.000090	<u>M</u> Ga < 0.001001	<u>O</u> Hg < 0.005000	<u>M</u> Ru < 0.000100	<u>M</u> Tm < 0.000100
<u>M</u> Bi < 0.005003	<u>O</u> Ge < 0.015000	<u>s</u> Mo	<u>M</u> Sm < 0.000100	<u>M</u> Sn < 0.003002
<u>O</u> B < 0.005000	<u>M</u> Au < 0.001001	<u>M</u> Nd < 0.000100	<u>O</u> Sc < 0.000700	<u>s</u> Tl
<u>O</u> Cd 0.003400	<u>M</u> Hf < 0.002001	<u>O</u> Ni < 0.002000	<u>M</u> Se < 0.050029	<u>O</u> W < 0.007000
<u>s</u> Ca	<u>M</u> Ho < 0.000100	<u>M</u> Nb < 0.002001	<u>n</u> Si	<u>M</u> U < 0.000100
<u>M</u> Ce < 0.000500	<u>M</u> In < 0.001001	<u>n</u> Os	<u>M</u> Ag < 0.001001	<u>O</u> V < 0.004000
<u>M</u> Cs < 0.001001	<u>M</u> Ir < 0.000100	<u>M</u> Pd < 0.003002	<u>s</u> Na	<u>M</u> Yb < 0.000100
<u>O</u> Cr < 0.010000	<u>s</u> Fe	<u>s</u> P	<u>O</u> Sr 0.005000	<u>M</u> Y < 0.000100
<u>M</u> Co < 0.001001	<u>M</u> La < 0.000200	<u>M</u> Pt < 0.000100	<u>s</u> S	<u>M</u> Zn 0.016610
<u>O</u> Cu < 0.020000	<u>M</u> Pb 0.002001	<u>s</u> K	<u>M</u> Ta < 0.001001	<u>M</u> Zr < 0.004002

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

## 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
 HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
 For the validation of analytical methods  
 For the preparation of "working reference samples"  
 For interference studies and the determination of correction coefficients  
 For detection limit and linearity studies  
 For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

## 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

## 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

**10.0 QUALITY STANDARD DOCUMENTATION**

- 10.1 ISO 9001 Quality Management System Registration  
- SAI Global File Number 010105
- 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"  
- Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission  
- Domestic Licensing of Production and Utilization Facilities
- 10.5 10CFR21 - Nuclear Regulatory Commission  
- Reporting Defects and Non-Compliance

**11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY**

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

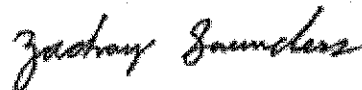
**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

**Certification Date:** July 12, 2013

**Expiration Date:** **EXPIRES**  
01<sup>st</sup> 2015

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:** Zach Saunders  
Product Documentation Technician



**Certificate Approved By:** Allyson Guilliams  
Quality Control Supervisor



**Certifying Officer:** Paul Gaines  
PhD., Senior Technical Director



Reagent

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**M6020ICS-0B\_00006**

**1.0 INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0 DESCRIPTION OF CRM      Stock Solution**

Catalog No.:                      6020ICS-0B

Lot Number:                        **G2-MEB463151**

Matrix:                                3% HNO<sub>3</sub>(v/v)

2 µg/mL ea:

Ag,              As,              Cd,              Co,              Cr<sub>3</sub>,              Cu,              Mn,              Ni,              Zn

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Arsenic, As	2.000 ± 0.013 µg/mL	Gadmiun, Cd	2.000 ± 0.013 µg/mL	Chromium+3, Cr3	2.000 ± 0.013 µg/mL
Cobalt, Co	2.000 ± 0.013 µg/mL	Copper, Cu	2.000 ± 0.013 µg/mL	Manganese, Mn	2.000 ± 0.013 µg/mL
Nickel, Ni	2.000 ± 0.013 µg/mL	Silver, Ag	2.000 ± 0.013 µg/mL	Zinc, Zn	2.000 ± 0.013 µg/mL

**Certified Density:**      1.012      g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean  
 $x_i$  = individual results  
 n = number of measurements

$$\text{Uncertainty } (\pm) = 2 [ \sum (s_i)^2 ]^{1/2}$$

2 = the coverage factor.  
 $[ \sum (s_i)^2 ]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

**4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS**

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.
- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

#### 4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

**4.2 BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

**4.3 THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

**4.4 GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

**Low Silver Note:** This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

**8.0 HAZARDOUS INFORMATION** - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

**9.0 HOMOGENEITY** - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.



**10.0 QUALITY STANDARD DOCUMENTATION**

- 10.1 ISO 9001 Quality Management System Registration  
- SAI Global File Number 010105
- 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"  
- Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission  
- Domestic Licensing of Production and Utilization Facilities
- 10.5 10CFR21 - Nuclear Regulatory Commission  
- Reporting Defects and Non-Compliance

**11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY**

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

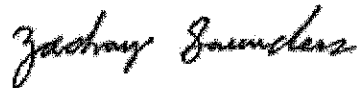
11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: March 25, 2013

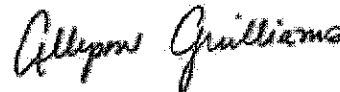
Expiration Date: **EXPIRES**  
01<sup>st</sup> 2015

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

Certificate Prepared By: Zach Saunders  
Product Documentation Technician



Certificate Approved By: Allyson Guilliams  
Quality Control Supervisor



Certifying Officer: Paul Gaines  
PhD., Senior Technical Director



Reagent

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**MCALSPECAREV\_00005**

1.0 INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 DESCRIPTION OF CRM Custom Solution  
Catalog No.: TAPITT-CAL-SPECA-REV  
Lot Number: H2-MEB524026  
Matrix: 3% HNO<sub>3</sub>(v/v)

2,500 µg/mL ea:

Ca, K, Mg, Na,

1,250 µg/mL ea:

Fe,

25 µg/mL ea:

Al, Mn,

5 µg/mL ea:

Ag, As, Ba, Be, Cd, Co, Cr<sub>3</sub>, Cu, Ni,  
Pb, Se, Sr, Tl, V, Zn

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	24.99 ± 0.18 µg/mL	Arsenic, As	4.998 ± 0.032 µg/mL	Barium, Ba	5.000 ± 0.032 µg/mL
Beryllium, Be	5.000 ± 0.028 µg/mL	Cadmium, Cd	4.998 ± 0.032 µg/mL	Calcium, Ca	2,500 ± 11 µg/mL
Chromium+3, Cr <sub>3</sub>	5.000 ± 0.028 µg/mL	Cobalt, Co	4.999 ± 0.032 µg/mL	Copper, Cu	4.999 ± 0.032 µg/mL
Iron, Fe	1,250 ± 6 µg/mL	Lead, Pb	4.998 ± 0.025 µg/mL	Magnesium, Mg	2,500 ± 16 µg/mL
Manganese, Mn	24.99 ± 0.17 µg/mL	Nickel, Ni	5.003 ± 0.028 µg/mL	Potassium, K	2,500 ± 11 µg/mL
Selenium, Se	5.002 ± 0.028 µg/mL	Silver, Ag	5.000 ± 0.036 µg/mL	Sodium, Na	2,499 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.000 ± 0.032 µg/mL	Vanadium, V	5.000 ± 0.032 µg/mL
Zinc, Zn	5.004 ± 0.032 µg/mL				

Certified Density: 1.051 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$(\bar{x})$  = mean

$x_i$  = individual results

$n$  = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

## 4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$(\bar{x})$  = mean

$x_i$  = individual results

$n$  = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

- 4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).
- 4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.
- 4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN $\mu\text{g}/\text{mL}$ - N/A

### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
 HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
 For the validation of analytical methods  
 For the preparation of "working reference samples"  
 For interference studies and the determination of correction coefficients  
 For detection limit and linearity studies  
 For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep Tightly sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . Do Not pipette from the container. Do Not return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

## 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

## 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

- 10.1 **ISO 9001 Quality Management System Registration**  
 - SAI Global File Number 010105
- 10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**  
 - Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**  
 - Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**  
 - Domestic Licensing of Production and Utilization Facilities
- 10.5 **10CFR21 - Nuclear Regulatory Commission**  
 - Reporting Defects and Non-Compliance

**11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY**

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

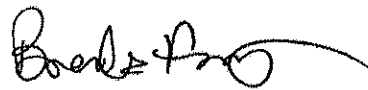
**Certification Date:** April 04, 2014

**Expiration Date:**

**EXPIRES**  
01<sup>st</sup> 2015

**12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS**

**Certificate Prepared By:** Brenda Francis  
Product Documentation Technician



**Certificate Approved By:** Brian Alexander  
PhD., Technical Process Director



**Certifying Officer:** Paul Gaines  
PhD., Senior Technical Director





Reagent

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**MICPMSICV\_00018**



Reference Materials Producer  
Cert #2495.01

# SPEXertificate®

## Certificate of Reference Material



Chemical Testing  
Cert #2495.02

**Catalog Number:** ZCAL-60-250 **Lot No.** 7-230WL  
**Description:** Custom Claritas Standard  
**Matrix:** 5% HNO<sub>3</sub> / Tr. Tart. Acid / Tr. HF

This CLARITAS PPT® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations.

### Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Uncertainty	SRM	Analyte	Labeled	Uncertainty	SRM
Ca	1000 µg/mL	±5 µg/mL	3109a*	Co	2 µg/mL	±0.01 µg/mL	3113*
K	1000 µg/mL	±5 µg/mL	3141a*	Cr	2 µg/mL	±0.01 µg/mL	3112a*
Mg	1000 µg/mL	±5 µg/mL	3131a*	Cu	2 µg/mL	±0.01 µg/mL	3114*
Na	1000 µg/mL	±5 µg/mL	3152a*	Mo	2 µg/mL	±0.01 µg/mL	3134*
Fe	500 µg/mL	±3 µg/mL	3126a*	Ni	2 µg/mL	±0.01 µg/mL	3136*
Si	100 µg/mL	±0.5 µg/mL	3150*	Pb	2 µg/mL	±0.01 µg/mL	3128*
Al	10 µg/mL	±0.05 µg/mL	3101a*	Sb	2 µg/mL	±0.01 µg/mL	3102a*
Mn	10 µg/mL	±0.05 µg/mL	3132*	Se	2 µg/mL	±0.01 µg/mL	3149*
Ag	2 µg/mL	±0.01 µg/mL	3151*	Sn	2 µg/mL	±0.01 µg/mL	3161a*
As	2 µg/mL	±0.01 µg/mL	3103a*	Sr	2 µg/mL	±0.01 µg/mL	3153a*
B	2 µg/mL	±0.01 µg/mL	3107*	Ti	2 µg/mL	±0.01 µg/mL	3162a*
Ba	2 µg/mL	±0.01 µg/mL	3104a*	Tl	2 µg/mL	±0.01 µg/mL	3158*
Be	2 µg/mL	±0.01 µg/mL	3105a*	V	2 µg/mL	±0.01 µg/mL	3165*
Cd	2 µg/mL	±0.01 µg/mL	3108*	Zn	2 µg/mL	±0.01 µg/mL	3168a*

\* - indicates NIST SRM † - Indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# ALL 8

### Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.4	Ga	<2	Ir	<0.1	Pd	<1	Sc	30	Tm	5
Bi	<1	Gd	4	La	5	Pr	5	Sm	<4	U	0.08
Ce	6	Ge	<8	Li	<4	Pt	<0.1	Ta	7	W	10
Cs	<0.08	Hf	0.7	Lu	4	Rb	30	Tb	5	Y	5
Dy	4	Hg	<0.6	Nb	5	Re	4	Te	<4	Yb	4
Er	<0.4	Ho	5	Nd	<3	Rh	<0.2	Th	4	Zr	7
Eu	<0.5	In	<0.2	P	<300	Ru	<2				

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the labeled value. This includes uncertainty components due to preparation, measurement, homogeneity, short-term and long-term stability, as well as transpiration loss. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: NOV 2014

Certifying Officer: [Signature]

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# Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principles for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

## Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

## Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

## Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

## Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

## Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$  where X = certified value, U = expanded uncertainty, x = property value
- $U = k u_c$  where k = 2 is the coverage factor at the 95% confidence level
- $u_c$  is obtained by combining the individual element standard uncertainty components  $u_i$ , and  $u_c = \sqrt{\sum u_i^2}$

## Certification Traveler Report:

All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

## Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, Inc. be liable for any loss of profits or any incidental, special, or consequential damages.

**SPEX CertiPrep** 

Your Science is Our Passion.®

203 Norcross Ave, Metuchen, NJ 08840  
www.spexcrtiprep.com • E-mail: crmsales@spexcsp.com  
Page 1 of 6  
Phone: 1-800-LAB-SPEX • Fax: 732-603-9647



Reagent

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**MMSICSAB-1\_00007**

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 **DESCRIPTION OF CRM**                      **Custom Solution**  
 Catalog No.:                                      TAPITT-MSICSAB-1  
 Lot Number:                                        **H2-MEB524028**  
 Matrix:    3% HNO<sub>3</sub>(v/v)

10 µg/mL ea:

Ba,                      Be,                      Pb,                      Sr,                      Tl,                      V

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Barium, Ba	9.99 ± 0.06 µg/mL	Beryllium, Be	10.00 ± 0.06 µg/mL	Lead, Pb	10.01 ± 0.05 µg/mL
Strontium, Sr	10.00 ± 0.06 µg/mL	Thallium, Tl	10.00 ± 0.06 µg/mL	Vanadium, V	9.99 ± 0.06 µg/mL

**Certified Density:**                      1.022                      g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean  
 $x_i$  = individual results  
 n = number of measurements

$$\text{Uncertainty } (\pm) = 2 [ \sum (s_i)^2 ]^{1/2}$$

2 = the coverage factor.  
 $[ \sum (s_i)^2 ]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 **TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS**

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.
- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

#### 4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN $\mu\text{g/mL}$ - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep **Tightly** sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

#### 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

#### 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"

- Chemical Testing - Accredited A2LA Certificate Number 883.01

### 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Materials Production - Accredited A2LA Certificate Number 883.02

### 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

### 10.5 10CFR21 - Nuclear Regulatory Commission

- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

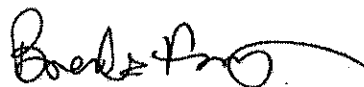
**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: April 04, 2014

Expiration Date: **EXPIRES**  
01/2015

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Brenda Francis  
Product Documentation Technician



Certificate Approved By: Brian Alexander  
PhD., Technical Process Director



Certifying Officer: Paul Gaines  
PhD., Senior Technical Director



Reagent

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**MMSICSAB-2\_00006**



**1.0** INORGANIC VENTURES is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0 DESCRIPTION OF CRM**      **Custom Solution**

Catalog No.:                      TAPITT-MSICSAB-2

Lot Number:                        **G2-MEB467043**

Matrix:                                3% HNO<sub>3</sub>(v/v),  
tr. HF

250 µg/mL ea:

Si,

50 µg/mL ea:

Sn,

25 µg/mL ea:

B,                                      Se,

10 µg/mL ea:

Sb

**3.0 CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.06 µg/mL	Boron, B	24.98 ± 0.17 µg/mL	Selenium, Se	25.01 ± 0.21 µg/mL
Silicon, Si	249.9 ± 1.6 µg/mL	Tin, Sn	50.04 ± 0.36 µg/mL		

**Certified Density:**      1.018      g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 [ \sum (s_i)^2 ]^{1/2}$$

2 = the coverage factor.

$[ \sum (s_i)^2 ]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

"Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/CRM. See section 4.2 for balance traceability.

#### 4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	070514
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	992106
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330

**4.2 BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

**4.3 THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

**4.4 GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep Tightly sealed when not in use. Store and use at 20 ± 4°C. Do Not pipette from the container. Do Not return portions removed from pipetting to container.

**Element Specific Information** - For specific information regarding any element; Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

**HF Note:** This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

#### 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

- 10.1 ISO 9001 Quality Management System Registration  
- SAI Global File Number 010105
- 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"  
- Chemical Testing - Accredited A2LA Certificate Number 883.01
- 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission  
- Domestic Licensing of Production and Utilization Facilities
- 10.5 10CFR21 - Nuclear Regulatory Commission  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: March 08, 2013

Expiration Date: **EXPIRES**  
01/2015

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Donna Senn  
Product Documentation Technician

*Donna Senn*

Certificate Approved By: Brian Alexander  
PhD., Technical Process Director

*Brian Alexander*

Certifying Officer: Paul Gaines  
PhD., Senior Technical Director

*Paul R. Gaines*

Reagent

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**MTAPITTTICPMS\_00018**

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



2.0 **DESCRIPTION OF CRM**                      **Custom Solution**  
 Catalog No.:                                      TAPITT-MS-ICPMS  
 Lot Number:                                        G2-MEB506053  
 Matrix:    0.7% HNO<sub>3</sub>(v/v)

200 µg/mL ea:

Al,                      Ba,

100 µg/mL ea:

B,                      Fe,                      Sr,

50 µg/mL ea:

Co,                      Mn,                      Ni,                      V,                      Zn,

25 µg/mL ea:

Cu,

20 µg/mL ea:

Cr<sub>3</sub>,

5 µg/mL ea:

Ag,                      Be,                      Cd,                      Ti,

4 µg/mL ea:

As,

2 µg/mL ea:

Pb,

1 µg/mL ea:

Se

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	200.0 ± 1.3 µg/mL	Arsenic, As	4.002 ± 0.030 µg/mL	Barium, Ba	200.0 ± 1.3 µg/mL
Beryllium, Be	5.002 ± 0.029 µg/mL	Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	5.001 ± 0.035 µg/mL
Chromium+3, Cr <sub>3</sub>	20.01 ± 0.13 µg/mL	Cobalt, Co	50.03 ± 0.25 µg/mL	Copper, Cu	25.01 ± 0.17 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	2.001 ± 0.010 µg/mL	Manganese, Mn	50.03 ± 0.32 µg/mL
Nickel, Ni	50.00 ± 0.33 µg/mL	Selenium, Se	1.000 ± 0.007 µg/mL	Silver, Ag	5.002 ± 0.033 µg/mL
Strontium, Sr	100.0 ± 0.6 µg/mL	Thallium, Tl	5.001 ± 0.034 µg/mL	Vanadium, V	49.99 ± 0.34 µg/mL
Zinc, Zn	50.02 ± 0.28 µg/mL				

Certified Density:                      1.005                      g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$(\bar{x})$  = mean

$x_i$  = individual results

$n$  = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

· The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/IRM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	Calculated		See Sec. 4.2
B	ICP Assay	3107	070514
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

## 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

## 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep Tightly sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . Do Not pipette from the container. Do Not return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

## 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

## 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

- 10.1 ISO 9001 Quality Management System Registration  
- SAI Global File Number 010105
- 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"  
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- 10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02
- 10.4 10CFR50 Appendix B - Nuclear Regulatory Commission  
- Domestic Licensing of Production and Utilization Facilities
- 10.5 10CFR21 - Nuclear Regulatory Commission  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

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**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: December 04, 2013

Expiration Date: **EXPIRES**

01/2015

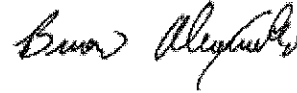


12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Christy Shortridge  
Product Documentation Technician



Certificate Approved By: Brian Alexander  
PhD., Technical Process Director



Certifying Officer: Paul Gaines  
PhD., Senior Technical Director



### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

<b>Product code</b>	TAPITMS-ICPMS
<b>Product name</b>	Multi-element Solution Standard in Dilute Nitric Acid
<b>Common Name</b>	Contains: 200 µg/mL ea: Al, Ba; 100 µg/mL ea: B, Fe, Sr; 50 µg/mL ea: Co, Mn, Ni, V, Zn; 25 µg/mL Cu; 20 µg/mL Cr3; 5 µg/mL ea: Ag, Be, Cd, Tl; 4 µg/mL As; 2 µg/mL Pb; 1 µg/mL Se
<b>Manufacturer, importer, supplier</b>	Inorganic Ventures 300 Technology Drive Christiansburg, VA 24073 web: www.inorganicventures.com
<b>Emergency telephone number</b>	800-424-9300 CHEMTREC (24 hrs)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% Weight	ACGIH*	OSHA*
7732-18-5	Water	~99.3	N/A	N/A
7697-37-2	Nitric Acid	~0.7	2 ppm TWA	2 ppm TWA; 5 mg/m3 TWA

\* ACGIH - Occupational Exposure Limits - TWAs

\* OSHA - Final PELs - Time Weighted Averages (TWAs)

### 3. HAZARDS IDENTIFICATION

<b>Emergency Overview</b>	
<ul style="list-style-type: none"> <li>Vapours may be irritating to eyes, nose, throat, and lungs</li> <li>Corrosive</li> </ul>	
<b>Eye contact</b>	<ul style="list-style-type: none"> <li>Contact with eyes may cause irritation</li> </ul>
<b>Skin contact</b>	<ul style="list-style-type: none"> <li>Substance may cause slight skin irritation</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>May cause irritation of respiratory tract</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>Harmful if swallowed</li> </ul>

### 4. FIRST AID MEASURES

<b>General advice</b>	<ul style="list-style-type: none"> <li>Show this safety data sheet to the doctor in attendance</li> </ul>
<b>Skin contact</b>	<ul style="list-style-type: none"> <li>Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes</li> <li>Consult a physician if necessary</li> </ul>
<b>Eye contact</b>	<ul style="list-style-type: none"> <li>Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes</li> <li>Keep eye wide open while rinsing</li> <li>If eye irritation persists, consult a specialist</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>Move to fresh air in case of accidental inhalation of vapours</li> <li>If breathing is difficult, give oxygen</li> <li>Consult a physician if necessary</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>Call a physician or Poison Control Centre immediately</li> <li>If swallowed, seek medical advice immediately and show this container or label</li> <li>If conscious, drink plenty of water</li> </ul>

### 5. FIRE-FIGHTING MEASURES

<b>Flash point</b>	NA
<b>Suitable extinguishing media</b>	<ul style="list-style-type: none"> <li>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment</li> </ul>

Specific hazards	<ul style="list-style-type: none"> <li>• Thermal decomposition can lead to release of irritating gases and vapours</li> </ul>
Specific methods	<ul style="list-style-type: none"> <li>• Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations</li> </ul>
Special protective equipment for firefighters	<ul style="list-style-type: none"> <li>• As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear</li> </ul>
NFPA (National Fire Protection Association)	<ul style="list-style-type: none"> <li>• Health - 2</li> <li>• Fire Hazard - 0</li> <li>• Reactivity - 0</li> </ul>
Under conditions giving incomplete combustion, hazardous gases produced may consist of:	<ul style="list-style-type: none"> <li>• nitrogen oxides (NOx).</li> </ul>

#### 6 ACCIDENTAL RELEASE MEASURES

Personal precautions	<ul style="list-style-type: none"> <li>• Evacuate personnel to safe areas</li> <li>• Keep people away from and upwind of spill/leak</li> <li>• Wear personal protective equipment</li> <li>• Ensure adequate ventilation</li> </ul>
Environmental precautions	<ul style="list-style-type: none"> <li>• Prevent further leakage or spillage if safe to do so</li> <li>• Prevent product from entering drains</li> </ul>
Methods for cleaning up	<ul style="list-style-type: none"> <li>• Dam up</li> <li>• Neutralize with lime milk or soda and flush with plenty of water</li> <li>• Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container</li> <li>• After cleaning, flush away traces with water</li> </ul>

#### 7 HANDLING AND STORAGE

##### Handling

Technical measures/Precautions	<ul style="list-style-type: none"> <li>• Use only in area provided with appropriate exhaust ventilation</li> </ul>
Safe handling advice	<ul style="list-style-type: none"> <li>• Wear personal protective equipment</li> </ul>

##### Storage

Technical measures/Precautions	<ul style="list-style-type: none"> <li>• Keep in properly labelled containers</li> <li>• Store at room temperature in the original container</li> <li>• Keep containers tightly closed in a dry, cool and well-ventilated place</li> </ul>
Incompatible products	<ul style="list-style-type: none"> <li>• organic materials</li> <li>• reducing agents</li> </ul>

#### 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Personal protective equipment</b>	
Hand protection	<ul style="list-style-type: none"> <li>• impervious gloves</li> </ul>
Eye protection	<ul style="list-style-type: none"> <li>• tightly fitting safety goggles</li> </ul>
Respiratory protection	<ul style="list-style-type: none"> <li>• Ensure adequate ventilation</li> </ul>
Skin and body protection	<ul style="list-style-type: none"> <li>• Chemical resistant apron</li> <li>• Lab coat</li> </ul>
Hygiene measures	<ul style="list-style-type: none"> <li>• When using, do not eat, drink or smoke</li> <li>• Regular cleaning of equipment, work area and clothing</li> </ul>

#### 9 PHYSICAL AND CHEMICAL PROPERTIES

##### General Information

Form liquid.

Appearance clear  
 Colour yellow tint.  
 Odour None.

**Important Health Safety and Environmental Information**

pH 0 to 2  
 Boiling point/range 100°C  
 Flash point N/A  
 Vapour pressure NA.  
 Water solubility miscible.

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	<ul style="list-style-type: none"> <li>Stable under normal conditions</li> <li>Hazardous polymerization does not occur</li> </ul>
<b>Materials to avoid</b>	<ul style="list-style-type: none"> <li>organic materials</li> <li>reducing agents</li> </ul>
<b>Hazardous decomposition products</b>	<ul style="list-style-type: none"> <li>nitrogen oxides (NOx)</li> </ul>

**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Component Information**

CAS	Chemical Name	% Weight	LD50/oral/rat =	LD50/dermal/rat =
7732-18-5	Water	~99.3	N/A	N/A
7697-37-2	Nitric Acid	~0.7	Inhalation LC50 Rat: 130 mg/kg/4H	Inhalation LC50 Rat: 130 mg/kg/4H

**Product Information**

<b>Local effects</b>	
<b>Skin irritation</b>	May cause skin irritation and/or dermatitis.
<b>Eye irritation</b>	May cause eye irritation with susceptible persons.
<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Ingestion</b>	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
<b>Chronic toxicity</b>	Avoid repeated exposure.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects**

**Component Information**

CAS	Chemical Name	% Weight	EFAD*	EFFSD*	EMD - Ecotoxicity*
7732-18-5	Water	~99.3	N/A	N/A	N/A
7697-37-2	Nitric Acid	~0.7	N/A	N/A	N/A

\* EFAD - Ecotoxicity - Freshwater Algae Data  
 \* EFFSD - Ecotoxicity - Freshwater Fish Species Data  
 \* EMD - Ecotoxicity - Microtox Data

**Product Information**

Do not allow material to contaminate ground water or sewage system

**Other information**

**13. DISPOSAL CONSIDERATIONS**

Waste from residues / unused products	<ul style="list-style-type: none"> <li>In accordance with local and national regulations</li> </ul>
Contaminated packaging	<ul style="list-style-type: none"> <li>Empty containers should be taken for local recycling, recovery or waste disposal</li> </ul>

#### 14. TRANSPORT INFORMATION

##### DOT

UN-No UN3264 / Class 8  
 Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s  
 Packing group III

##### IATA-DGR

UN-No UN3264 / Class 8  
 Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s  
 Packing group III

#### 15. REGULATORY INFORMATION

##### U.S. INVENTORIES:

CAS	Chemical Name	% Weight	CPCL*	NJRTK*	CERCLA/SARA*
7732-18-5	Water	~99.3	N/A	N/A	N/A
7697-37-2	Nitric Acid	~0.7	N/A	sn 1356	1000 lb final RQ; 454 kg final RQ

\* CPCL - California - Proposition 65 - Carcinogens List

\* NJRTK - New Jersey - Department of Health RTK List

\* CERCLA/SARA - Hazardous Substances and their Reportable Quantities

##### INTERNATIONAL INVENTORIES:

CAS	Chemical Name	% Weight	WHMIS*	EINECCS - European Union*
7732-18-5	Water	~99.3	Uncontrolled product according to WHMIS classification criteria	231-791-2
7697-37-2	Nitric Acid	~0.7	C; E (including 60%, 61.3%, 63%, 67%, 67.18%, 70%, 90%); E (10%)	231-714-2

\* WHMIS - Canada - WHMIS - Classifications of Substances

\* EINECCS - European Union - European inventory of Existing Commercial Chemical Substances (EINECCS)

#### 16. OTHER INFORMATION

The above information is believed to be accurate and represents the best information available to us. It has been compiled from the data presented in various technical publications and our experience and should only be used as a guide for handling this product. It is the user's responsibility to determine the suitability of this information for their particular purposes. We assume that only qualified individuals, trained and familiar with procedures suitable to this product will handle this material. Inorganic Ventures, Inc. assumes no responsibility and shall not be held liable for any damage resulting from misuse of this product.

Reagent

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**MTAPITTMSA\_00023**



300 Technology Drive  
Christiansburg, VA 24073 · USA  
inorganicventures.com

# CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030  
fax: 540.585.3012  
info@inorganicventures.com

1407255  
1407256  
1407257

## 1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105)).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: TAPITT-MS-A  
Lot Number: H2-MEB532044  
Matrix: 3% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 5 000 µg/mL ea:  
Ca, K, Mg,  
Na

REC. 11/13/14 SLB

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Calcium	5 000 ± 22 µg/mL	Magnesium	5 000 ± 23 µg/mL
Potassium	5 000 ± 22 µg/mL	Sodium	5 000 ± 22 µg/mL

Certified Density: 1.071 g/mL (measured at 20 ± 1 °C)

### Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean  
 $x_i$  = individual results  
 $n$  = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.  
[  $\sum (s_i)^2$  ]<sup>1/2</sup> = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

- 4.1 Thermometer Calibration**
- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.
- 4.2 Balance Calibration**
- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.
- 4.3 Glassware Calibration**
- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.
- 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )**
- N/A
- 6.0 INTENDED USE**
- For the calibration of analytical instruments and validation of analytical methods as appropriate.
- 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**
- 7.1 Storage and Handling Recommendations**
- Keep tightly sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . Do not pipette from the container. Do not return removed aliquots to container.
- 8.0 HAZARDOUS INFORMATION**
- Please refer to the Safety Data Sheet for information regarding this CRM/RM.
- 9.0 HOMOGENEITY**
- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.
- 10.0 QUALITY STANDARD DOCUMENTATION**
- 10.1 10CFR50 Appendix B - Nuclear Regulatory Commission**
- Domestic Licensing of Production and Utilization Facilities
- 10.2 10CFR21 - Nuclear Regulatory Commission**
- Reporting defects and Non-Compliance
- 10.3 ISO 9001 Quality Management System Registration**
- SAI Global File Number 010105
- 10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"**
- Chemical Testing - Accredited / A2LA Certificate Number 883.01
- 10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**
- Reference Material Producer - Accredited / A2LA Certificate Number 883.02



11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 05, 2014

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date **EXPIRES**  
01~~2~~2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

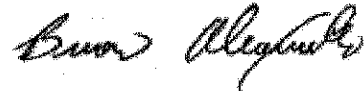
Certificate Prepared By:

Donna Senn  
Product Documentation Technician



Certificate Approved By:

Brian Alexander  
PhD., Technical Process Director



Certifying Officer:

Paul Gaines  
PhD., Senior Technical Director



Reagent

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**MTAPIITMSC\_00029**



300 Technology Drive  
 Christiansburg, VA 24073 - USA  
 inorganicventures.com

# CERTIFICATE OF ANALYSIS

tel: 800.669.6799 540.585.3030  
 fax: 540.585.3012  
 info@inorganicventures.com

1407263  
 1407261  
 1407262

## 1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number 010105).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
 Catalog Number: TAPITT-MS-C  
 Lot Number: H2-MEB532046  
 Matrix: 3% (v/v) HNO3  
 tr. HF  
 Value / Analyte(s): 1 000 µg/mL ea:  
 Si,  
 200 µg/mL ea:  
 Sn,  
 100 µg/mL ea:  
 Mo, Ti,  
 50 µg/mL ea:  
 Sb

*rec'd 11/13/14 SLB*

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony	49.98 ± 0.38 µg/mL	Molybdenum	100.0 ± 0.5 µg/mL
Silicon	1 000 ± 7 µg/mL	Tin	200.0 ± 1.4 µg/mL
Titanium	100.0 ± 0.7 µg/mL		

Certified Density: 1.017 g/mL (measured at 20 ± 1 °C)

### Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

##### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

##### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

##### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES ( $\mu\text{g/mL}$ )

- N/A

#### 6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

##### 7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . Do not pipette from the container. Do not return removed aliquots to container.

- HF Note: This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

#### 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

#### 10.0 QUALITY STANDARD DOCUMENTATION

##### 10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

##### 10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

##### 10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

##### 10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 05, 2014

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date

EXPIRES

01 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

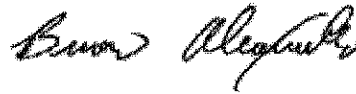
Certificate Prepared By:

Donna Senn  
Product Documentation Technician



Certificate Approved By:

Brian Alexander  
PhD., Technical Process Director



Certifying Officer:

Paul Gaines  
PhD., Senior Technical Director



Reagent

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**VOA8260GAS1ST\_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. :** 567645 **Lot No.:** A0105755

**Description :** 8260 List 1 / Std #3 Gases  
8260 List 1 / Std #3 Gases 2,000 ug/ml, P&T Methanol, 1 ml/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)			
1	Dichlorodifluoromethane (CFC-12)	1,996.9 µg/mL	+/-	16.4920	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q16A-86)		+/-	25.3820	µg/mL	Unstressed
	Purity 99%		+/-	28.4359	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.6 µg/mL	+/-	13.5945	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBC8470V)		+/-	23.6556	µg/mL	Unstressed
	Purity 99%		+/-	26.9268	µg/mL	Stressed
3	Vinyl chloride	2,001.1 µg/mL	+/-	27.3546	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 17542)		+/-	33.4976	µg/mL	Unstressed
	Purity 99%		+/-	35.8765	µg/mL	Stressed
4	1,3-Butadiene	1,999.9 µg/mL	+/-	23.4547	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBD5808V)		+/-	30.3891	µg/mL	Unstressed
	Purity 99%		+/-	32.9901	µg/mL	Stressed
5	Bromomethane (methyl bromide)	1,998.7 µg/mL	+/-	30.0266	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	35.7004	µg/mL	Unstressed
	Purity 99%		+/-	37.9363	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,000.1 µg/mL	+/-	18.0935	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot SHBD1717V)		+/-	26.4730	µg/mL	Unstressed
	Purity 99%		+/-	29.4228	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	1,999.1 µg/mL	+/-	17.9677	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot Q9B-58)		+/-	26.3801	µg/mL	Unstressed
	Purity 99%		+/-	29.3364	µg/mL	Stressed
8	Trichlorofluoromethane (CFC-11)	2,001.1 µg/mL	+/-	24.2299	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)		+/-	30.9989	µg/mL	Unstressed
	Purity 99%		+/-	33.5557	µg/mL	Stressed

Reagent

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**VOA8260GAS1ST\_00081**





# 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. :** 567645 **Lot No.:** A0105755  
**Description :** 8260 List 1 / Std #3 Gases  
8260 List 1 / Std #3 Gases 2,000 ug/ml, P&T Methanol, 1 ml/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)			
1	Dichlorodifluoromethane (CFC-12)	1,996.9 µg/mL	+/-	16.4920	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q16A-86)		+/-	25.3820	µg/mL	Unstressed
	Purity 99%		+/-	28.4359	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.6 µg/mL	+/-	13.5945	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBC8470V)		+/-	23.6556	µg/mL	Unstressed
	Purity 99%		+/-	26.9268	µg/mL	Stressed
3	Vinyl chloride	2,001.1 µg/mL	+/-	27.3546	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 17542)		+/-	33.4976	µg/mL	Unstressed
	Purity 99%		+/-	35.8765	µg/mL	Stressed
4	1,3-Butadiene	1,999.9 µg/mL	+/-	23.4547	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBD5808V)		+/-	30.3891	µg/mL	Unstressed
	Purity 99%		+/-	32.9901	µg/mL	Stressed
5	Bromomethane (methyl bromide)	1,998.7 µg/mL	+/-	30.0266	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	35.7004	µg/mL	Unstressed
	Purity 99%		+/-	37.9363	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,000.1 µg/mL	+/-	18.0935	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot SHBD1717V)		+/-	26.4730	µg/mL	Unstressed
	Purity 99%		+/-	29.4228	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	1,999.1 µg/mL	+/-	17.9677	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot Q9B-58)		+/-	26.3801	µg/mL	Unstressed
	Purity 99%		+/-	29.3364	µg/mL	Stressed
8	Trichlorofluoromethane (CFC-11)	2,001.1 µg/mL	+/-	24.2299	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)		+/-	30.9989	µg/mL	Unstressed
	Purity 99%		+/-	33.5557	µg/mL	Stressed

Reagent

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**VOA8260GAS1ST\_00082**



# 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. :** 567645 **Lot No.:** A0105755  
**Description :** 8260 List 1 / Std #3 Gases  
8260 List 1 / Std #3 Gases 2,000 ug/ml, P&T Methanol, 1 ml/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)			
1	Dichlorodifluoromethane (CFC-12)	1,996.9 µg/mL	+/-	16.4920	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot Q16A-86)		+/-	25.3820	µg/mL	Unstressed
	Purity 99%		+/-	28.4359	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.6 µg/mL	+/-	13.5945	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBC8470V)		+/-	23.6556	µg/mL	Unstressed
	Purity 99%		+/-	26.9268	µg/mL	Stressed
3	Vinyl chloride	2,001.1 µg/mL	+/-	27.3546	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 17542)		+/-	33.4976	µg/mL	Unstressed
	Purity 99%		+/-	35.8765	µg/mL	Stressed
4	1,3-Butadiene	1,999.9 µg/mL	+/-	23.4547	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBD5808V)		+/-	30.3891	µg/mL	Unstressed
	Purity 99%		+/-	32.9901	µg/mL	Stressed
5	Bromomethane (methyl bromide)	1,998.7 µg/mL	+/-	30.0266	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	35.7004	µg/mL	Unstressed
	Purity 99%		+/-	37.9363	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,000.1 µg/mL	+/-	18.0935	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot SHBD1717V)		+/-	26.4730	µg/mL	Unstressed
	Purity 99%		+/-	29.4228	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	1,999.1 µg/mL	+/-	17.9677	µg/mL	Gravimetric
	CAS # 75-43-4 (Lot Q9B-58)		+/-	26.3801	µg/mL	Unstressed
	Purity 99%		+/-	29.3364	µg/mL	Stressed
8	Trichlorofluoromethane (CFC-11)	2,001.1 µg/mL	+/-	24.2299	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot SHBD5121V)		+/-	30.9989	µg/mL	Unstressed
	Purity 99%		+/-	33.5557	µg/mL	Stressed

Reagent

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**VOA8260GAS2ND\_00051**



# 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. : 567645.sec Lot No.: A099261  
 Description : 8260 List 1 / Std #3 Gases  
8260 List 1 / Std #3 Gases 2,000 ug/ml, P&T Methanol, 1 ml/ampul  
 Container Size : 2 mL Pkg Amt: > 1 mL  
 Expiration Date : November 30, 2015 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)	2,002.2 µg/mL	+/-	16.7616	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 18348)		+/-	21.2987	µg/mL	Unstressed
	Purity 99%		+/-	24.7536	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,000.6 µg/mL	+/-	15.8216	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/-	21.2729	µg/mL	Unstressed
	Purity 99%		+/-	24.7262	µg/mL	Stressed
3	Vinyl chloride	2,001.9 µg/mL	+/-	14.6785	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/-	21.2759	µg/mL	Unstressed
	Purity 99%		+/-	24.7329	µg/mL	Stressed
4	1,3-Butadiene	2,002.8 µg/mL	+/-	16.7307	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/-	21.3051	µg/mL	Unstressed
	Purity 99%		+/-	24.7611	µg/mL	Stressed
5	Bromomethane (methyl bromide)	1,999.6 µg/mL	+/-	16.2313	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/-	21.2671	µg/mL	Unstressed
	Purity 99%		+/-	24.7183	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,001.0 µg/mL	+/-	14.6721	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot Q18B-13)		+/-	21.2666	µg/mL	Unstressed
	Purity 99%		+/-	24.7221	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,004.4 µg/mL	+/-	15.1665	µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/-	21.3071	µg/mL	Unstressed
	Purity 99%		+/-	24.7678	µg/mL	Stressed
8	Trichlorofluoromethane (CFC-11)	2,001.8 µg/mL	+/-	16.2157	µg/mL	Gravimetric
	CAS # 75-69-4.SEC (Lot Q139-99)		+/-	21.2894	µg/mL	Unstressed
	Purity 99%		+/-	24.7442	µg/mL	Stressed

Reagent

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**VOA8260GAS2ND\_00080**



# 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. : 567645.sec Lot No.: A099261  
 Description : 8260 List 1 / Std #3 Gases  
8260 List 1 / Std #3 Gases 2,000 ug/ml, P&T Methanol, 1 ml/ampul  
 Container Size : 2 mL Pkg Amt: > 1 mL  
 Expiration Date : November 30, 2015 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)	2,002.2 µg/mL	+/-	16.7616	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 18348)		+/-	21.2987	µg/mL	Unstressed
	Purity 99%		+/-	24.7536	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,000.6 µg/mL	+/-	15.8216	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/-	21.2729	µg/mL	Unstressed
	Purity 99%		+/-	24.7262	µg/mL	Stressed
3	Vinyl chloride	2,001.9 µg/mL	+/-	14.6785	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/-	21.2759	µg/mL	Unstressed
	Purity 99%		+/-	24.7329	µg/mL	Stressed
4	1,3-Butadiene	2,002.8 µg/mL	+/-	16.7307	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/-	21.3051	µg/mL	Unstressed
	Purity 99%		+/-	24.7611	µg/mL	Stressed
5	Bromomethane (methyl bromide)	1,999.6 µg/mL	+/-	16.2313	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/-	21.2671	µg/mL	Unstressed
	Purity 99%		+/-	24.7183	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,001.0 µg/mL	+/-	14.6721	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot Q18B-13)		+/-	21.2666	µg/mL	Unstressed
	Purity 99%		+/-	24.7221	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,004.4 µg/mL	+/-	15.1665	µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/-	21.3071	µg/mL	Unstressed
	Purity 99%		+/-	24.7678	µg/mL	Stressed
8	Trichlorofluoromethane (CFC-11)	2,001.8 µg/mL	+/-	16.2157	µg/mL	Gravimetric
	CAS # 75-69-4.SEC (Lot Q139-99)		+/-	21.2894	µg/mL	Unstressed
	Purity 99%		+/-	24.7442	µg/mL	Stressed

Reagent

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**VOA8260INTRES\_00048**





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## Certificate of Analysis

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

**Catalog No. :** 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 CAS # 25725-11-5 Purity 99%	5,000.0 µg/mL	+/-	29.0689	µg/mL	Gravimetric
			+/-	110.6323	µg/mL	Unstressed
			+/-	111.0833	µg/mL	Stressed
2	Fluorobenzene CAS # 462-06-6 Purity 99%	250.0 µg/mL	+/-	1.4535	µg/mL	Gravimetric
			+/-	5.5316	µg/mL	Unstressed
			+/-	5.5542	µg/mL	Stressed
3	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99%	5,000.0 µg/mL	+/-	29.0689	µg/mL	Gravimetric
			+/-	110.6323	µg/mL	Unstressed
			+/-	111.0833	µg/mL	Stressed
4	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99%	250.0 µg/mL	+/-	1.4535	µg/mL	Gravimetric
			+/-	5.5316	µg/mL	Unstressed
			+/-	5.5542	µg/mL	Stressed
5	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99%	250.0 µg/mL	+/-	1.4535	µg/mL	Gravimetric
			+/-	5.5316	µg/mL	Unstressed
			+/-	5.5542	µg/mL	Stressed

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

Reagent

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**VOA8260KET1ST\_00033**



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## Certificate of Analysis

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

**Catalog No. :** 567642 **Lot No.:** A093365  
**Description :** 8260 List 1 / Std #2 Ketones  
8260 List 1 / Std #2 Ketones 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 2016 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 67-64-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
2	2-Butanone (MEK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 78-93-3		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 108-10-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
4	2-Hexanone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 591-78-6		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	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\_00034**



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## Certificate of Analysis

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

**Catalog No. :** 567642 **Lot No.:** A093365  
**Description :** 8260 List 1 / Std #2 Ketones  
8260 List 1 / Std #2 Ketones 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 2016 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 67-64-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
2	2-Butanone (MEK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 78-93-3		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 108-10-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
4	2-Hexanone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 591-78-6		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
<b>Solvent:</b>	P&T Methanol/Water (90:10)					
	CAS # 67-56-1/7732-18-5					
	Purity 99%					

Reagent

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**VOA8260KET1ST\_00035**



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## Certificate of Analysis

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**Catalog No. :** 567642 **Lot No.:** A093365  
**Description :** 8260 List 1 / Std #2 Ketones  
8260 List 1 / Std #2 Ketones 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 2016 **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 67-64-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
2	2-Butanone (MEK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 78-93-3		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 108-10-1		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
4	2-Hexanone	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 591-78-6		+/-	798.6896	µg/mL	Unstressed
	Purity 99%		+/-	799.0807	µg/mL	Stressed
<b>Solvent:</b>	P&T Methanol/Water (90:10)					
	CAS # 67-56-1/7732-18-5					
	Purity 99%					

Reagent

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**VOA8260KET2ND\_00036**



# RESTEK CERTIFIED REFERENCE MATERIAL

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## Certificate of Analysis



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

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

**Catalog No. :** 567642.SEC                      **Lot No.:** A0101295  
**Description :** 8260 List 1 / Std #2 Ketones  
8260/624 Ketones Standard 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul  
**Container Size :** 2 mL                              **Pkg Amt:** > 1 mL  
**Expiration Date :** February 28, 2017                      **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	10,015.2 µg/mL	+/-	58.6412	µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot 0902033)		+/-	533.0320	µg/mL	Unstressed
	Purity 99%		+/-	533.6197	µg/mL	Stressed
2	2-Butanone (MEK)	10,010.0 µg/mL	+/-	58.6108	µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot VEGGI)		+/-	532.7553	µg/mL	Unstressed
	Purity 99%		+/-	533.3427	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,012.4 µg/mL	+/-	58.6248	µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/-	532.8830	µg/mL	Unstressed
	Purity 99%		+/-	533.4706	µg/mL	Stressed
4	2-Hexanone	10,016.4 µg/mL	+/-	58.6482	µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot ZSVCD-FF)		+/-	533.0959	µg/mL	Unstressed
	Purity 99%		+/-	533.6837	µg/mL	Stressed
<b>Solvent:</b>	P&T Methanol/Water (90:10)					
	CAS # 67-56-1/7732-18-5					
	Purity 99%					

Reagent

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**VOA8260KET2ND\_00037**

# RESTEK CERTIFIED REFERENCE MATERIAL

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## Certificate of Analysis



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

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

**Catalog No. :** 567642.SEC                      **Lot No.:** A0101295  
**Description :** 8260 List 1 / Std #2 Ketones  
8260/624 Ketones Standard 10,000 ug/ml, P&T Methanol/Water (90:10),  
1 ml/ampul  
**Container Size :** 2 mL                                      **Pkg Amt:** > 1 mL  
**Expiration Date :** February 28, 2017                      **Storage:** 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	Acetone	10,015.2 µg/mL	+/- 58.6412 µg/mL Gravimetric
	CAS # 67-64-1.SEC (Lot 0902033)		+/- 533.0320 µg/mL Unstressed
	Purity 99%		+/- 533.6197 µg/mL Stressed
2	2-Butanone (MEK)	10,010.0 µg/mL	+/- 58.6108 µg/mL Gravimetric
	CAS # 78-93-3.SEC (Lot VEGGI)		+/- 532.7553 µg/mL Unstressed
	Purity 99%		+/- 533.3427 µg/mL Stressed
3	4-Methyl-2-pentanone (MIBK)	10,012.4 µg/mL	+/- 58.6248 µg/mL Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 532.8830 µg/mL Unstressed
	Purity 99%		+/- 533.4706 µg/mL Stressed
4	2-Hexanone	10,016.4 µg/mL	+/- 58.6482 µg/mL Gravimetric
	CAS # 591-78-6.SEC (Lot ZSVCD-FF)		+/- 533.0959 µg/mL Unstressed
	Purity 99%		+/- 533.6837 µg/mL Stressed
<b>Solvent:</b>	P&T Methanol/Water (90:10) CAS # 67-56-1/7732-18-5 Purity 99%		

Reagent

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**VOA8260KET2ND\_00039**



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

**Catalog No. :** 569721.SEC                      **Lot No.:** A0108157

**Description :** 8260 List 1/ Std #2 Ketones (2015)  
8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

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

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

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone	12,504.0 µg/mL	+/-	73.2137 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot 0902033)		+/-	665.4917 µg/mL	Unstressed
	Purity 99%		+/-	666.2255 µg/mL	Stressed
2	2-Butanone (MEK)	12,506.0 µg/mL	+/-	73.2254 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot VEGGI)		+/-	665.5981 µg/mL	Unstressed
	Purity 99%		+/-	666.3320 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,537.3 µg/mL	+/-	73.4088 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/-	667.2658 µg/mL	Unstressed
	Purity 99%		+/-	668.0015 µg/mL	Stressed
4	2-Hexanone	12,508.7 µg/mL	+/-	73.2410 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot ZSVCD-FF)		+/-	665.7401 µg/mL	Unstressed
	Purity 99%		+/-	666.4741 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\_00017**



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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. : 567641 Lot No.: A093581  
 Description : 8260 List 1 / Std #1 MegaMix  
8260 List 1 / Std #1 MegaMix 1000-50,000 µg/ml, P&T Methanol, 1 ml/ampul  
 Container Size : 2 mL Pkg Amt: > 1 mL  
 Expiration Date : February 2016 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 Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 Purity 97%	1,999.9 µg/mL	+/-	11.6279	µg/mL	Gravimetric
			+/-	44.2519	µg/mL	Unstressed
			+/-	44.4323	µg/mL	Stressed
3	1,1-dichloroethene CAS # 75-35-4 Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 Purity 99%	20,000.0 µg/mL	+/-	116.2756	µg/mL	Gravimetric
			+/-	442.5291	µg/mL	Unstressed
			+/-	444.3332	µg/mL	Stressed
5	Iodomethane (methyl iodide) CAS # 74-88-4 Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed
6	Allyl chloride (3-chloropropene) CAS # 107-05-1 Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
7	Methyl acetate CAS # 79-20-9 Purity 99%	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
			+/-	221.2646	µg/mL	Unstressed
			+/-	222.1666	µg/mL	Stressed
8	Carbon disulfide CAS # 75-15-0 Purity 98%	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
			+/-	44.2527	µg/mL	Unstressed
			+/-	44.4331	µg/mL	Stressed
9	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
			+/-	44.2531	µg/mL	Unstressed
			+/-	44.4335	µg/mL	Stressed

10	Acrylonitrile	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 107-13-1				442.5291		Unstressed
	Purity 99%				444.3332		Stressed
11	Methyl-tert-butyl ether ( MTBE )	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 1634-04-4				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
12	cis-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-59-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
13	n-Hexane (C6)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 110-54-3				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
14	1,1-Dichloroethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-34-3				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
15	2,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 594-20-7				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
16	trans-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-60-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
17	chloroform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 67-66-3				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
18	Isobutanol (2-Methyl-1-propanol)	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric
	CAS # 78-83-1				1,106.3228		Unstressed
	Purity 99%				1,110.8331		Stressed
19	Bromochloromethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-97-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
20	Tetrahydrofuran	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric
	CAS # 109-99-9				88.5061		Unstressed
	Purity 99%				88.8670		Stressed
21	1,1,1-trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-55-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
22	Cyclohexane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-82-7				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
23	1,1-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 563-58-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
24	carbon tetrachloride	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 56-23-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
25	n-Heptane (C7)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 142-82-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
26	Benzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-43-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
27	1,2-Dichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 107-06-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
28	Trichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-01-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed



29	Methylcyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-87-2			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
30	1,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 78-87-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
31	1,4-Dioxane	40,000.0	µg/mL	+/-	232.5513	µg/mL	Gravimetric	
	CAS # 123-91-1			+/-	885.0582		µg/mL	Unstressed
	Purity 99%			+/-	888.6665		µg/mL	Stressed
32	Dibromomethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 74-95-3			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
33	bromodichloromethane	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 75-27-4			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
34	cis-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 10061-01-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
35	Toluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-88-3			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
36	Ethyl methacrylate	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 97-63-2			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
37	trans-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 10061-02-6			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
38	1,1,2-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 79-00-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
39	1,3-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 142-28-9			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
40	Tetrachloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 127-18-4			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
41	dibromochloromethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric	
	CAS # 124-48-1			+/-	44.2527		µg/mL	Unstressed
	Purity 98%			+/-	44.4331		µg/mL	Stressed
42	1,2-Dibromoethane (EDB)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 106-93-4			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
43	Chlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-90-7			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
44	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 630-20-6			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
45	m-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 108-38-3			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
46	p-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 106-42-3			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
47	o-Xylene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 95-47-6			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed

48	Ethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-41-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
49	Styrene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-42-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-82-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
51	bromoform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-25-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
52	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-34-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 96-18-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-57-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
55	n-Propylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 103-65-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
56	Bromobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-86-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-67-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-49-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-43-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-06-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 95-63-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
62	sec-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 135-98-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-Cymene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 99-87-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
64	1,3-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 541-73-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-46-7			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 104-51-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
72	1,2,3-Trichlorobenzene CAS # 87-61-6 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
<b>Solvent:</b>	P&T Methanol CAS # 67-56-1 Purity 99%				

**Column:**  
60m x .25mm x 1.4µm  
Rtx-502.2 (cat.#10916)

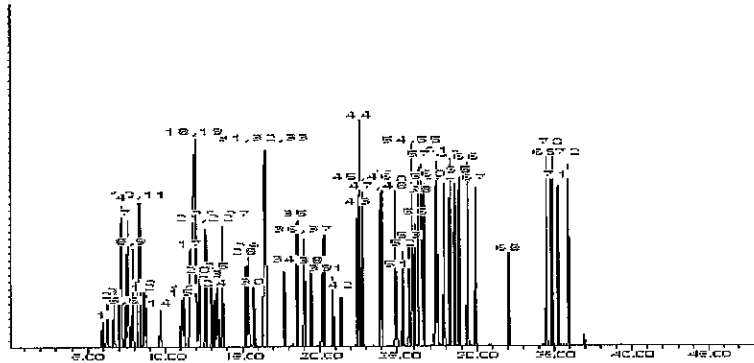
**Carrier Gas:**  
helium-constant pressure 30 psi

**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



*Jennifer L. Pollino*  
Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013

Balance: B251644995

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

Reagent

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**VOA8260MEGA1\_00024**



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

www.restek.com



## Certificate of Analysis

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

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

**Catalog No. :** 567641 **Lot No.:** A093581  
**Description :** 8260 List 1 / Std #1 MegaMix  
8260 List 1 / Std #1 MegaMix 1000-50,000 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 2016 **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)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 60-29-7		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113)	1,999.9 µg/mL	+/-	11.6279	µg/mL	Gravimetric
	CAS # 76-13-1		+/-	44.2519	µg/mL	Unstressed
	Purity 97%		+/-	44.4323	µg/mL	Stressed
3	1,1-dichloroethene	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-35-4		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
4	tert-Butanol (TBA)	20,000.0 µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 75-65-0		+/-	442.5291	µg/mL	Unstressed
	Purity 99%		+/-	444.3332	µg/mL	Stressed
5	Iodomethane (methyl iodide)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-88-4		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
6	Allyl chloride (3-chloropropene)	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 107-05-1		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
7	Methyl acetate	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 79-20-9		+/-	221.2646	µg/mL	Unstressed
	Purity 99%		+/-	222.1666	µg/mL	Stressed
8	Carbon disulfide	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-15-0		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
9	Methylene chloride (dichloromethane)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-09-2		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed

10	Acrylonitrile	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 107-13-1				442.5291		Unstressed
	Purity 99%				444.3332		Stressed
11	Methyl-tert-butyl ether ( MTBE )	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 1634-04-4				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
12	cis-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-59-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
13	n-Hexane (C6)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 110-54-3				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
14	1,1-Dichloroethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-34-3				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
15	2,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 594-20-7				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
16	trans-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-60-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
17	chloroform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 67-66-3				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
18	Isobutanol (2-Methyl-1-propanol)	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric
	CAS # 78-83-1				1,106.3228		Unstressed
	Purity 99%				1,110.8331		Stressed
19	Bromochloromethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-97-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
20	Tetrahydrofuran	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric
	CAS # 109-99-9				88.5061		Unstressed
	Purity 99%				88.8670		Stressed
21	1,1,1-trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-55-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
22	Cyclohexane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-82-7				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
23	1,1-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 563-58-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
24	carbon tetrachloride	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 56-23-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
25	n-Heptane (C7)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 142-82-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
26	Benzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-43-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
27	1,2-Dichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 107-06-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
28	Trichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-01-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed

29	Methylcyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-87-2			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
30	1,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 78-87-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
31	1,4-Dioxane	40,000.0	µg/mL	+/-	232.5513	µg/mL	Gravimetric	
	CAS # 123-91-1			+/-	885.0582		µg/mL	Unstressed
	Purity 99%			+/-	888.6665		µg/mL	Stressed
32	Dibromomethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 74-95-3			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
33	bromodichloromethane	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 75-27-4			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
34	cis-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 10061-01-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
35	Toluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-88-3			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
36	Ethyl methacrylate	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 97-63-2			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
37	trans-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 10061-02-6			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
38	1,1,2-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 79-00-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
39	1,3-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 142-28-9			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
40	Tetrachloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 127-18-4			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
41	dibromochloromethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric	
	CAS # 124-48-1			+/-	44.2527		µg/mL	Unstressed
	Purity 98%			+/-	44.4331		µg/mL	Stressed
42	1,2-Dibromoethane (EDB)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 106-93-4			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
43	Chlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-90-7			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
44	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 630-20-6			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
45	m-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 108-38-3			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
46	p-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 106-42-3			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
47	o-Xylene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 95-47-6			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed

48	Ethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-41-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
49	Styrene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-42-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-82-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
51	bromoform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-25-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
52	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-34-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 96-18-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-57-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
55	n-Propylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 103-65-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
56	Bromobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-86-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-67-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-49-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-43-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-06-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 95-63-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
62	sec-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 135-98-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-Cymene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 99-87-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
64	1,3-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 541-73-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-46-7			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 104-51-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed



67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
72	1,2,3-Trichlorobenzene CAS # 87-61-6 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
<b>Solvent:</b>	P&T Methanol CAS # 67-56-1 Purity 99%				

**Column:**  
60m x .25mm x 1.4µm  
Rtx-502.2 (cat.#10916)

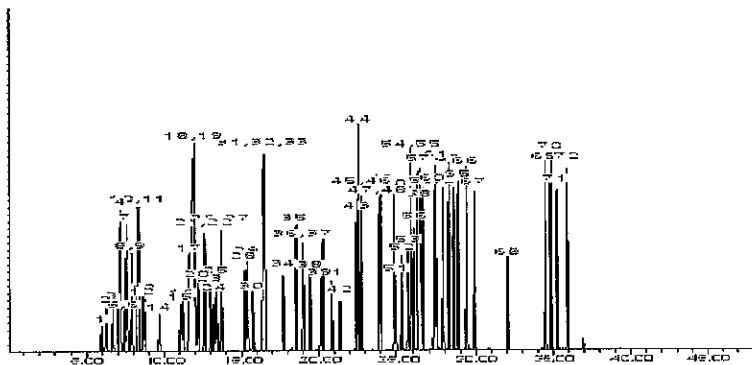
**Carrier Gas:**  
helium-constant pressure 30 psi

**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



*Jennifer L. Pollino*  
Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013

Balance: B251644995

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

Reagent

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**VOA8260MEGA1\_00025**



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

www.restek.com



## Certificate of Analysis

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

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

Catalog No. : 567641 Lot No.: A093581  
 Description : 8260 List 1 / Std #1 MegaMix  
8260 List 1 / Std #1 MegaMix 1000-50,000 µg/ml, P&T Methanol, 1 ml/ampul  
 Container Size : 2 mL Pkg Amt: > 1 mL  
 Expiration Date : February 2016 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)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 60-29-7		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113)	1,999.9 µg/mL	+/-	11.6279	µg/mL	Gravimetric
	CAS # 76-13-1		+/-	44.2519	µg/mL	Unstressed
	Purity 97%		+/-	44.4323	µg/mL	Stressed
3	1,1-dichloroethene	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-35-4		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
4	tert-Butanol (TBA)	20,000.0 µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 75-65-0		+/-	442.5291	µg/mL	Unstressed
	Purity 99%		+/-	444.3332	µg/mL	Stressed
5	Iodomethane (methyl iodide)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-88-4		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
6	Allyl chloride (3-chloropropene)	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 107-05-1		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
7	Methyl acetate	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 79-20-9		+/-	221.2646	µg/mL	Unstressed
	Purity 99%		+/-	222.1666	µg/mL	Stressed
8	Carbon disulfide	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-15-0		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
9	Methylene chloride (dichloromethane)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-09-2		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed

10	Acrylonitrile	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 107-13-1				442.5291		Unstressed
	Purity 99%				444.3332		Stressed
11	Methyl-tert-butyl ether ( MTBE )	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 1634-04-4				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
12	cis-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-59-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
13	n-Hexane (C6)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 110-54-3				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
14	1,1-Dichloroethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-34-3				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
15	2,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 594-20-7				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
16	trans-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-60-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
17	chloroform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 67-66-3				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
18	Isobutanol (2-Methyl-1-propanol)	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric
	CAS # 78-83-1				1,106.3228		Unstressed
	Purity 99%				1,110.8331		Stressed
19	Bromochloromethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-97-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
20	Tetrahydrofuran	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric
	CAS # 109-99-9				88.5061		Unstressed
	Purity 99%				88.8670		Stressed
21	1,1,1-trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-55-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
22	Cyclohexane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-82-7				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
23	1,1-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 563-58-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
24	carbon tetrachloride	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 56-23-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
25	n-Heptane (C7)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 142-82-5				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
26	Benzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-43-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
27	1,2-Dichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 107-06-2				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
28	Trichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-01-6				44.2531		Unstressed
	Purity 99%				44.4335		Stressed

29	Methylcyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-87-2			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
30	1,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 78-87-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
31	1,4-Dioxane	40,000.0	µg/mL	+/-	232.5513	µg/mL	Gravimetric	
	CAS # 123-91-1			+/-	885.0582		µg/mL	Unstressed
	Purity 99%			+/-	888.6665		µg/mL	Stressed
32	Dibromomethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 74-95-3			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
33	bromodichloromethane	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 75-27-4			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
34	cis-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 10061-01-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
35	Toluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-88-3			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
36	Ethyl methacrylate	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 97-63-2			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
37	trans-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 10061-02-6			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
38	1,1,2-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 79-00-5			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
39	1,3-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 142-28-9			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
40	Tetrachloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 127-18-4			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
41	dibromochloromethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric	
	CAS # 124-48-1			+/-	44.2527		µg/mL	Unstressed
	Purity 98%			+/-	44.4331		µg/mL	Stressed
42	1,2-Dibromoethane (EDB)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 106-93-4			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
43	Chlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-90-7			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
44	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 630-20-6			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
45	m-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 108-38-3			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
46	p-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 106-42-3			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
47	o-Xylene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 95-47-6			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed

48	Ethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-41-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
49	Styrene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-42-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-82-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
51	bromoform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-25-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
52	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-34-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 96-18-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-57-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
55	n-Propylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 103-65-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
56	Bromobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-86-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-67-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-49-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-43-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-06-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 95-63-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
62	sec-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 135-98-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-Cymene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 99-87-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
64	1,3-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 541-73-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-46-7			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 104-51-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
72	1,2,3-Trichlorobenzene CAS # 87-61-6 Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
<b>Solvent:</b>	P&T Methanol CAS # 67-56-1 Purity 99%				

**Column:**  
60m x .25mm x 1.4µm  
Rtx-502.2 (cat.#10916)

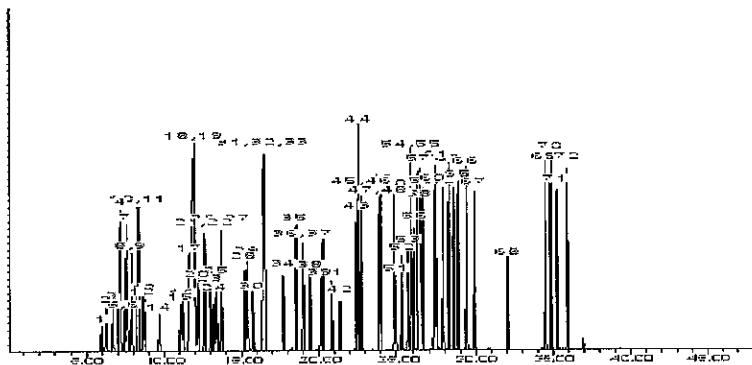
**Carrier Gas:**  
helium-constant pressure 30 psi

**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



*Jennifer L. Pollino*  
Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013

Balance: B251644995

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

Reagent

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**VOA8260MEGA2\_00026**





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

www.restek.com



## Certificate of Analysis

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

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

**Catalog No. :** 567641.sec **Lot No.:** A093733  
**Description :** 8260 List 1 / Std #1 MegaMix  
8260 List 1 / Std #1 MegaMix 1,000-50,000 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 2016 **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)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 60-29-7.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 76-13-1.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
3	1,1-Dichloroethene	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-35-4.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
4	tert-Butanol (TBA)	20,000.0 µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 75-65-0.SEC		+/-	442.5291	µg/mL	Unstressed
	Purity 99%		+/-	444.3332	µg/mL	Stressed
5	Iodomethane (methyl iodide)	2,000.0 µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 74-88-4.SEC		+/-	44.2540	µg/mL	Unstressed
	Purity 97%		+/-	44.4344	µg/mL	Stressed
6	Allyl chloride (3-chloropropene)	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 107-05-1.SEC		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
7	Methyl acetate	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 79-20-9.SEC		+/-	221.2646	µg/mL	Unstressed
	Purity 99%		+/-	222.1666	µg/mL	Stressed
8	Carbon disulfide	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-15-0.SEC		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
9	Methylene chloride (dichloromethane)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-09-2.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed

10	Acrylonitrile	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric	
	CAS # 107-13-1.SEC			+/-	442.5291		µg/mL	Unstressed
	Purity 99%			+/-	444.3332		µg/mL	Stressed
11	Methyl-tert-butyl ether ( MTBE )	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 1634-04-4.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
12	cis-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 156-59-2.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
13	n-Hexane (C6)	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric	
	CAS # 110-54-3.SEC			+/-	44.2549		µg/mL	Unstressed
	Purity 98%			+/-	44.4353		µg/mL	Stressed
14	1,1-Dichloroethane	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 75-34-3.SEC			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
15	2,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 594-20-7.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
16	trans-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric	
	CAS # 156-60-5.SEC			+/-	44.2540		µg/mL	Unstressed
	Purity 97%			+/-	44.4344		µg/mL	Stressed
17	Chloroform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 67-66-3.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
18	Isobutanol (2-Methyl-1-propanol)	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric	
	CAS # 78-83-1.SEC			+/-	1,106.3228		µg/mL	Unstressed
	Purity 99%			+/-	1,110.8331		µg/mL	Stressed
19	Bromochloromethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 74-97-5.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
20	Tetrahydrofuran	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric	
	CAS # 109-99-9.SEC			+/-	88.5061		µg/mL	Unstressed
	Purity 99%			+/-	88.8670		µg/mL	Stressed
21	1,1,1-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 71-55-6.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
22	Cyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 110-82-7.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
23	1,1-Dichloropropene	2,010.5	µg/mL	+/-	11.6890	µg/mL	Gravimetric	
	CAS # 563-58-6.SEC			+/-	44.4847		µg/mL	Unstressed
	Purity 98%			+/-	44.6661		µg/mL	Stressed
24	Carbon tetrachloride	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric	
	CAS # 56-23-5.SEC			+/-	44.2549		µg/mL	Unstressed
	Purity 98%			+/-	44.4353		µg/mL	Stressed
25	n-Heptane (C7)	2,000.1	µg/mL	+/-	11.6288	µg/mL	Gravimetric	
	CAS # 142-82-5.SEC			+/-	44.2553		µg/mL	Unstressed
	Purity 99%			+/-	44.4357		µg/mL	Stressed
26	Benzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 71-43-2.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
27	1,2-Dichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 107-06-2.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
28	Trichloroethene	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric	
	CAS # 79-01-6.SEC			+/-	44.2549		µg/mL	Unstressed
	Purity 98%			+/-	44.4353		µg/mL	Stressed

29	Methylcyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-87-2.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
30	1,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 78-87-5.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
31	1,4-Dioxane	40,000.0	µg/mL	+/-	232.5513	µg/mL	Gravimetric	
	CAS # 123-91-1.SEC			+/-	885.0582		µg/mL	Unstressed
	Purity 99%			+/-	888.6665		µg/mL	Stressed
32	Dibromomethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 74-95-3.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
33	Bromodichloromethane	2,000.1	µg/mL	+/-	11.6290	µg/mL	Gravimetric	
	CAS # 75-27-4.SEC			+/-	44.2562		µg/mL	Unstressed
	Purity 97%			+/-	44.4366		µg/mL	Stressed
34	cis-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 10061-01-5.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
35	Toluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-88-3.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
36	Ethyl methacrylate	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 97-63-2.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
37	trans-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric	
	CAS # 10061-02-6.SEC			+/-	44.2527		µg/mL	Unstressed
	Purity 98%			+/-	44.4331		µg/mL	Stressed
38	1,1,2-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 79-00-5.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
39	1,3-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 142-28-9.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
40	Tetrachloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 127-18-4.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
41	Dibromochloromethane	2,000.1	µg/mL	+/-	11.6290	µg/mL	Gravimetric	
	CAS # 124-48-1.SEC			+/-	44.2562		µg/mL	Unstressed
	Purity 97%			+/-	44.4366		µg/mL	Stressed
42	1,2-Dibromoethane (EDB)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 106-93-4.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
43	Chlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-90-7.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
44	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 630-20-6.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
45	m-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 108-38-3.SEC			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
46	p-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 106-42-3.SEC			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
47	o-Xylene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 95-47-6.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed

48	Ethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-41-4.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
49	Styrene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-42-5.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-82-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
51	Bromoform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-25-2.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-34-5.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 96-18-4.SEC			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 110-57-6.SEC			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
55	n-Propylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 103-65-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
56	Bromobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-86-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-67-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-49-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-43-4.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-06-6.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-63-6.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
62	sec-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 135-98-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)	2,000.1	µg/mL	+/-	11.6285	µg/mL	Gravimetric
	CAS # 99-87-6.SEC			+/-	44.2545	µg/mL	Unstressed
	Purity 96%			+/-	44.4349	µg/mL	Stressed
64	1,3-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 541-73-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-46-7.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 104-51-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

67	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
72	1,2,3-Trichlorobenzene CAS # 87-61-6.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

**Column:**

60m x .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:**

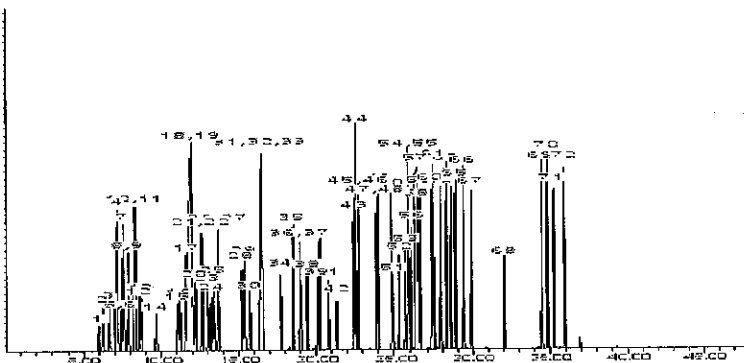
200°C

**Det. Temp:**

250°C

**Det. Type:**

MSD



*Jennifer L. Pollino*  
Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013

Balance: 1127510105

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

Reagent

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**VOA8260MEGA2\_00030**



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

www.restek.com



## Certificate of Analysis

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

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

**Catalog No. :** 567641.sec **Lot No.:** A093733  
**Description :** 8260 List 1 / Std #1 MegaMix  
8260 List 1 / Std #1 MegaMix 1,000-50,000 µg/ml, P&T Methanol, 1 ml/ampul  
**Container Size :** 2 mL **Pkg Amt:** > 1 mL  
**Expiration Date :** February 2016 **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)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 60-29-7.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 76-13-1.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
3	1,1-Dichloroethene	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-35-4.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed
4	tert-Butanol (TBA)	20,000.0 µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 75-65-0.SEC		+/-	442.5291	µg/mL	Unstressed
	Purity 99%		+/-	444.3332	µg/mL	Stressed
5	Iodomethane (methyl iodide)	2,000.0 µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 74-88-4.SEC		+/-	44.2540	µg/mL	Unstressed
	Purity 97%		+/-	44.4344	µg/mL	Stressed
6	Allyl chloride (3-chloropropene)	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 107-05-1.SEC		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
7	Methyl acetate	10,000.0 µg/mL	+/-	58.1378	µg/mL	Gravimetric
	CAS # 79-20-9.SEC		+/-	221.2646	µg/mL	Unstressed
	Purity 99%		+/-	222.1666	µg/mL	Stressed
8	Carbon disulfide	2,000.0 µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-15-0.SEC		+/-	44.2527	µg/mL	Unstressed
	Purity 98%		+/-	44.4331	µg/mL	Stressed
9	Methylene chloride (dichloromethane)	2,000.0 µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-09-2.SEC		+/-	44.2531	µg/mL	Unstressed
	Purity 99%		+/-	44.4335	µg/mL	Stressed

10	Acrylonitrile	20,000.0	$\mu\text{g/mL}$	+/-	116.2756	$\mu\text{g/mL}$	Gravimetric
	CAS # 107-13-1.SEC			+/-	442.5291		Unstressed
	Purity 99%			+/-	444.3332		Stressed
11	Methyl-tert-butyl ether ( MTBE )	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 1634-04-4.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
12	cis-1,2-Dichloroethene	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 156-59-2.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
13	n-Hexane (C6)	2,000.1	$\mu\text{g/mL}$	+/-	11.6286	$\mu\text{g/mL}$	Gravimetric
	CAS # 110-54-3.SEC			+/-	44.2549		Unstressed
	Purity 98%			+/-	44.4353		Stressed
14	1,1-Dichloroethane	2,000.0	$\mu\text{g/mL}$	+/-	11.6284	$\mu\text{g/mL}$	Gravimetric
	CAS # 75-34-3.SEC			+/-	44.2540		Unstressed
	Purity 97%			+/-	44.4344		Stressed
15	2,2-Dichloropropane	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 594-20-7.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
16	trans-1,2-Dichloroethene	2,000.0	$\mu\text{g/mL}$	+/-	11.6284	$\mu\text{g/mL}$	Gravimetric
	CAS # 156-60-5.SEC			+/-	44.2540		Unstressed
	Purity 97%			+/-	44.4344		Stressed
17	Chloroform	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 67-66-3.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
18	Isobutanol (2-Methyl-1-propanol)	50,000.0	$\mu\text{g/mL}$	+/-	290.6891	$\mu\text{g/mL}$	Gravimetric
	CAS # 78-83-1.SEC			+/-	1,106.3228		Unstressed
	Purity 99%			+/-	1,110.8331		Stressed
19	Bromochloromethane	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 74-97-5.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
20	Tetrahydrofuran	4,000.0	$\mu\text{g/mL}$	+/-	23.2563	$\mu\text{g/mL}$	Gravimetric
	CAS # 109-99-9.SEC			+/-	88.5061		Unstressed
	Purity 99%			+/-	88.8670		Stressed
21	1,1,1-Trichloroethane	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 71-55-6.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
22	Cyclohexane	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 110-82-7.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
23	1,1-Dichloropropene	2,010.5	$\mu\text{g/mL}$	+/-	11.6890	$\mu\text{g/mL}$	Gravimetric
	CAS # 563-58-6.SEC			+/-	44.4847		Unstressed
	Purity 98%			+/-	44.6661		Stressed
24	Carbon tetrachloride	2,000.1	$\mu\text{g/mL}$	+/-	11.6286	$\mu\text{g/mL}$	Gravimetric
	CAS # 56-23-5.SEC			+/-	44.2549		Unstressed
	Purity 98%			+/-	44.4353		Stressed
25	n-Heptane (C7)	2,000.1	$\mu\text{g/mL}$	+/-	11.6288	$\mu\text{g/mL}$	Gravimetric
	CAS # 142-82-5.SEC			+/-	44.2553		Unstressed
	Purity 99%			+/-	44.4357		Stressed
26	Benzene	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 71-43-2.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
27	1,2-Dichloroethane	2,000.0	$\mu\text{g/mL}$	+/-	11.6282	$\mu\text{g/mL}$	Gravimetric
	CAS # 107-06-2.SEC			+/-	44.2531		Unstressed
	Purity 99%			+/-	44.4335		Stressed
28	Trichloroethene	2,000.1	$\mu\text{g/mL}$	+/-	11.6286	$\mu\text{g/mL}$	Gravimetric
	CAS # 79-01-6.SEC			+/-	44.2549		Unstressed
	Purity 98%			+/-	44.4353		Stressed



29	Methylcyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-87-2.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
30	1,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 78-87-5.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
31	1,4-Dioxane	40,000.0	µg/mL	+/-	232.5513	µg/mL	Gravimetric	
	CAS # 123-91-1.SEC			+/-	885.0582		µg/mL	Unstressed
	Purity 99%			+/-	888.6665		µg/mL	Stressed
32	Dibromomethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 74-95-3.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
33	Bromodichloromethane	2,000.1	µg/mL	+/-	11.6290	µg/mL	Gravimetric	
	CAS # 75-27-4.SEC			+/-	44.2562		µg/mL	Unstressed
	Purity 97%			+/-	44.4366		µg/mL	Stressed
34	cis-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 10061-01-5.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
35	Toluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-88-3.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
36	Ethyl methacrylate	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 97-63-2.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
37	trans-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric	
	CAS # 10061-02-6.SEC			+/-	44.2527		µg/mL	Unstressed
	Purity 98%			+/-	44.4331		µg/mL	Stressed
38	1,1,2-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 79-00-5.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
39	1,3-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 142-28-9.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
40	Tetrachloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 127-18-4.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
41	Dibromochloromethane	2,000.1	µg/mL	+/-	11.6290	µg/mL	Gravimetric	
	CAS # 124-48-1.SEC			+/-	44.2562		µg/mL	Unstressed
	Purity 97%			+/-	44.4366		µg/mL	Stressed
42	1,2-Dibromoethane (EDB)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 106-93-4.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
43	Chlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 108-90-7.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
44	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 630-20-6.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed
45	m-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 108-38-3.SEC			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
46	p-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric	
	CAS # 106-42-3.SEC			+/-	22.1265		µg/mL	Unstressed
	Purity 99%			+/-	22.2167		µg/mL	Stressed
47	o-Xylene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric	
	CAS # 95-47-6.SEC			+/-	44.2531		µg/mL	Unstressed
	Purity 99%			+/-	44.4335		µg/mL	Stressed

48	Ethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-41-4.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
49	Styrene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-42-5.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
50	Isopropylbenzene (cumene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-82-8.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
51	Bromoform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-25-2.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
52	1,1,2,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-34-5.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
53	1,2,3-Trichloropropane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 96-18-4.SEC				44.2527		Unstressed
	Purity 98%				44.4331		Stressed
54	trans-1,4-Dichloro-2-butene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 110-57-6.SEC				44.2540		Unstressed
	Purity 97%				44.4344		Stressed
55	n-Propylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 103-65-1.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
56	Bromobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-86-1.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
57	1,3,5-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-67-8.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
58	2-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-49-8.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
59	4-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-43-4.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
60	tert-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-06-6.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
61	1,2,4-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-63-6.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
62	sec-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 135-98-8.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
63	4-Isopropyltoluene (p-cymene)	2,000.1	µg/mL	+/-	11.6285	µg/mL	Gravimetric
	CAS # 99-87-6.SEC				44.2545		Unstressed
	Purity 96%				44.4349		Stressed
64	1,3-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 541-73-1.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
65	1,4-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-46-7.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed
66	n-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 104-51-8.SEC				44.2531		Unstressed
	Purity 99%				44.4335		Stressed

67	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	2,000.0 µg/mL	+/- 11.6284 +/- 44.2540 +/- 44.4344	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
72	1,2,3-Trichlorobenzene CAS # 87-61-6.SEC Purity 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

**Column:**

60m x .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:**

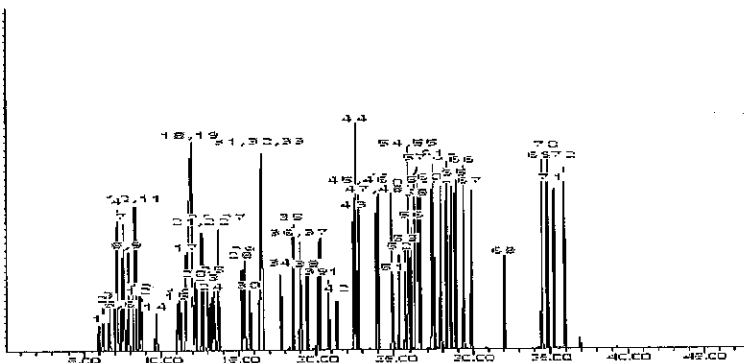
200°C

**Det. Temp:**

250°C

**Det. Type:**

MSD



*Jennifer L. Pollino*  
Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013

Balance: 1127510105

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

Reagent

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**VOA8260SURRES\_00073**



# CERTIFIED REFERENCE MATERIAL

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

www.restek.com

## Certificate of Analysis



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

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

Catalog No. : 567650 Lot No.: 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 CAS # 1868-53-7 Purity 99% (Lot 022012)	2,509.6 µg/mL	+/- 14.5910	µg/mL	Gravimetric	
			+/- 28.2993	µg/mL	Unstressed	
			+/- 32.5644	µg/mL	Stressed	
2	1,2-Dichloroethane-d4 CAS # 17060-07-0 Purity 99% (Lot 12K-027)	2,508.2 µg/mL	+/- 14.5829	µg/mL	Gravimetric	
			+/- 28.2836	µg/mL	Unstressed	
			+/- 32.5462	µg/mL	Stressed	
3	Toluene-d8 CAS # 2037-26-5 Purity 99% (Lot 13I-050)	2,508.8 µg/mL	+/- 14.5864	µg/mL	Gravimetric	
			+/- 28.2903	µg/mL	Unstressed	
			+/- 32.5540	µg/mL	Stressed	
4	1-Bromo-4-fluorobenzene (BFB) CAS # 460-00-4 Purity 99% (Lot 01127COV)	2,509.8 µg/mL	+/- 14.5922	µg/mL	Gravimetric	
			+/- 28.3016	µg/mL	Unstressed	
			+/- 32.5670	µg/mL	Stressed	

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

Reagent

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**VOA8260SURRES\_00075**

# 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. :** 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\_00046**





# 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. :** 567646 **Lot No.:** A0106957

**Description :** 8260 List 1 / Std #6 Vinyl Acetate  
8260 List 1 / Std #6 Vinyl Acetate 4000 ug/ml, P&T Methanol, 1 ml/ampul

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

**Expiration Date :** April 30, 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% (Lot STBC8935V)	4,027.0 µg/mL	+/-	23.6327	µg/mL	Gravimetric
			+/-	214.3321	µg/mL	Unstressed
			+/-	214.5684	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\_00060**



# 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.:** A0106504

**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 :** February 28, 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%	19,767.0 µg/mL (Lot 140903JLM)	+/- 115.7401 µg/mL Gravimetric +/- 633.7922 µg/mL Unstressed +/- 736.7140 µg/mL Stressed

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

Reagent

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**VOARESEE1ST\_00015**

# 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. : 568363-FL Lot No.: A097285  
 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 : February 28, 2015 Storage: 0°C or colder

### CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	3-Chlorobenzotrifluoride	5,001.0 µg/mL	+/-	29.3487	µg/mL	Gravimetric
	CAS # 98-15-7 (Lot 21324DO)		+/-	53.0822	µg/mL	Unstressed
	Purity 99%		+/-	61.7282	µg/mL	Stressed
2	4-Chlorobenzotrifluoride	5,003.0 µg/mL	+/-	29.3604	µg/mL	Gravimetric
	CAS # 98-56-6 (Lot 08507BO)		+/-	53.1034	µg/mL	Unstressed
	Purity 99%		+/-	61.7529	µg/mL	Stressed
3	2-Chlorobenzotrifluoride	5,005.0 µg/mL	+/-	29.3721	µg/mL	Gravimetric
	CAS # 88-16-4 (Lot I0316DQ)		+/-	53.1247	µg/mL	Unstressed
	Purity 99%		+/-	61.7775	µg/mL	Stressed
4	3-Chlorotoluene	5,000.0 µg/mL	+/-	29.3428	µg/mL	Gravimetric
	CAS # 108-41-8 (Lot 13528LX)		+/-	53.0716	µg/mL	Unstressed
	Purity 99%		+/-	61.7158	µg/mL	Stressed
5	2,4-Dichlorobenzotrifluoride	5,002.0 µg/mL	+/-	29.3545	µg/mL	Gravimetric
	CAS # 320-60-5 (Lot MKBL3552V)		+/-	53.0928	µg/mL	Unstressed
	Purity 99%		+/-	61.7405	µg/mL	Stressed
6	3,4-Dichlorobenzotrifluoride	5,000.0 µg/mL	+/-	29.3428	µg/mL	Gravimetric
	CAS # 328-84-7 (Lot 11105EJV)		+/-	53.0716	µg/mL	Unstressed
	Purity 99%		+/-	61.7158	µg/mL	Stressed
7	2,5-Dichlorobenzotrifluoride	5,000.0 µg/mL	+/-	29.3428	µg/mL	Gravimetric
	CAS # 320-50-3 (Lot 04415DSV)		+/-	53.0716	µg/mL	Unstressed
	Purity 99%		+/-	61.7158	µg/mL	Stressed
8	2,4-Dichlorotoluene	5,002.0 µg/mL	+/-	29.3545	µg/mL	Gravimetric
	CAS # 95-73-8 (Lot 07715JS)		+/-	53.0928	µg/mL	Unstressed
	Purity 99%		+/-	61.7405	µg/mL	Stressed

9	2,5-Dichlorotoluene CAS # 19398-61-9 Purity 99%	(Lot 10119CU)	5,000.0	µg/mL	+/- 29.3428 +/- 53.0716 +/- 61.7158	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2,6-Dichlorotoluene CAS # 118-69-4 Purity 99%	(Lot 16921JS)	5,001.0	µg/mL	+/- 29.3487 +/- 53.0822 +/- 61.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	3,4-Dichlorotoluene CAS # 95-75-0 Purity 99%	(Lot 09419AS)	5,003.0	µg/mL	+/- 29.3604 +/- 53.1034 +/- 61.7529	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	2,3-Dichlorotoluene CAS # 32768-54-0 Purity 99%	(Lot 00317)	5,008.0	µg/mL	+/- 29.3897 +/- 53.1565 +/- 61.8146	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2,4,5-Trichlorotoluene CAS # 6639-30-1 Purity 99%	(Lot 1767300)	5,001.0	µg/mL	+/- 29.3487 +/- 53.0822 +/- 61.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,3,6-Trichlorotoluene CAS # 2077-46-5 Purity 99%	(Lot RM01250)	5,001.0	µg/mL	+/- 29.3487 +/- 53.0822 +/- 61.7282	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Reagent

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**WNa2CO3P\_00007**



1 Reagent Lane  
Fair Lawn, NJ 07410  
201.796.7100 tel  
201.796.1329 fax

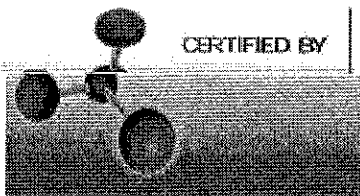
### Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0064970

This is to certify that units of the above mentioned lot number were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	S263	Quality Test / Release Date 4/8/2014	
Lot Number	138124		
Description	SODIUM CARBONATE, ANHYDROUS, CERTIFIED A.C.S.		
Country of Origin	China	* Suggested Retest Date	Apr-2019
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	White granular powder
ASSAY	%	>= 99.5	100.3
CALCIUM	%	<= 0.03	0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
LOSS ON HEATING @ 285 DEG C	%	<= 1.0	0.1
MAGNESIUM	%	<= 0.005	<0.001
PHOSPHATE (PO4)	%	<= 0.001	0.0010
POTASSIUM (K)	%	<= 0.005	0.001
SILICA (SiO2)	%	<= 0.005	0.005
SULFUR COMPOUNDS	%	<= 0.003	<0.0030



*Edgar E. Hare*  
Lab Manager Fair Lawn

1243950  
ID: WNa2CO3P\_00007  
Exp:07/09/18 Prpd:IRA Opn:07/09/14  
Sodium Carbonate

1243948  
ID: WNa2CO3P\_00007  
Exp:07/09/18 Prpd:IRA Opn:07/09/14  
Sodium Carbonate

1243949  
ID: WNa2CO3P\_00007  
Exp:07/09/18 Prpd:IRA Opn:07/09/14  
Sodium Carbonate

1243947  
ID: WNa2CO3P\_00007  
Exp:07/09/18 Prpd:IRA Opn:07/09/14  
Sodium Carbonate

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.  
\*Based on suggested storage condition.



# 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.: 180-40617-1

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-CW-9-0/1-0	180-40617-1	119	96	98	101
HD-CW-13-0/1-0	180-40617-2	116	95	99	99
HD-CW-13-0/1-0 DL	180-40617-2 DL	119	100	95	92
HD-CW-15A-0/1-0	180-40617-3	110	98	97	96
HD-CW-17-0/1-0	180-40617-4	113	96	100	96
HD-CW-17-0/1-0 DL	180-40617-4 DL	119	101	94	96
HD-CW-20-0/1-0	180-40617-5	116	95	94	94
HD-QC6-0/1-2	180-40617-6	117	98	101	98
	MB 180-131906/5	106	90	102	101
	MB 180-132193/4	112	97	96	90
	LCS 180-131906/8	102	90	96	94
	LCS 180-132193/7	93	82	88	90

DBFM = Dibromofluoromethane (Surr)	<u>QC LIMITS</u> 70-128
DCA = 1,2-Dichloroethane-d4 (Surr)	64-135
TOL = Toluene-d8 (Surr)	71-118
BFB = 4-Bromofluorobenzene (Surr)	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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 50128008.D  
 Lab ID: LCS 180-131906/8 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	7.25	73	50-139	
Vinyl chloride	10.0	8.63	86	53-138	
Bromomethane	10.0	10.7	107	33-150	
Chloroethane	10.0	8.87	89	36-142	
1,1-Dichloroethene	10.0	9.30	93	65-136	
Acetone	20.0	16.9	85	22-150	
Carbon disulfide	10.0	10.3	103	54-132	
Methylene Chloride	10.0	9.00	90	63-129	
trans-1,2-Dichloroethene	10.0	11.0	110	73-126	
Methyl tert-butyl ether	10.0	9.14	91	64-123	
1,1-Dichloroethane	10.0	9.56	96	73-126	
cis-1,2-Dichloroethene	10.0	9.96	100	70-120	
Bromochloromethane	10.0	9.94	99	70-127	
2-Butanone (MEK)	20.0	15.7	79	39-138	
Chloroform	10.0	9.92	99	72-127	
1,1,1-Trichloroethane	10.0	11.6	116	63-133	
Carbon tetrachloride	10.0	12.3	123	55-150	
Benzene	10.0	9.83	98	80-120	
1,2-Dichloroethane	10.0	9.32	93	68-132	
Trichloroethene	10.0	10.9	109	73-120	
1,2-Dichloropropane	10.0	8.59	86	76-124	
Bromodichloromethane	10.0	9.52	95	66-130	
cis-1,3-Dichloropropene	10.0	9.78	98	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	15.3	76	45-145	
Toluene	10.0	10.2	102	80-123	
trans-1,3-Dichloropropene	10.0	10.3	103	65-125	
1,1,2-Trichloroethane	10.0	8.96	90	77-127	
Tetrachloroethene	10.0	10.2	102	70-135	
2-Hexanone	20.0	12.4	62	25-132	
Dibromochloromethane	10.0	10.1	101	60-140	
1,2-Dibromoethane (EDB)	10.0	9.41	94	74-123	
Chlorobenzene	10.0	10.6	106	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	63-140	
Ethylbenzene	10.0	9.82	98	72-126	
Xylenes, Total	20.0	19.6	98	76-128	
Styrene	10.0	9.44	94	71-127	
Bromoform	10.0	9.13	91	46-150	
1,1,2,2-Tetrachloroethane	10.0	8.62	86	62-125	
1,4-Dioxane	200	140 J	70	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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 50130007.D  
 Lab ID: LCS 180-132193/7 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	7.72	77	50-139	
Vinyl chloride	10.0	8.54	85	53-138	
Bromomethane	10.0	9.06	91	33-150	
Chloroethane	10.0	8.18	82	36-142	
1,1-Dichloroethene	10.0	9.99	100	65-136	
Acetone	20.0	17.5	88	22-150	
Carbon disulfide	10.0	10.4	104	54-132	
Methylene Chloride	10.0	9.10	91	63-129	
trans-1,2-Dichloroethene	10.0	10.2	102	73-126	
Methyl tert-butyl ether	10.0	8.58	86	64-123	
1,1-Dichloroethane	10.0	9.29	93	73-126	
cis-1,2-Dichloroethene	10.0	9.94	99	70-120	
Bromochloromethane	10.0	9.56	96	70-127	
2-Butanone (MEK)	20.0	16.2	81	39-138	
Chloroform	10.0	9.59	96	72-127	
1,1,1-Trichloroethane	10.0	11.1	111	63-133	
Carbon tetrachloride	10.0	11.6	116	55-150	
Benzene	10.0	9.54	95	80-120	
1,2-Dichloroethane	10.0	9.10	91	68-132	
Trichloroethene	10.0	10.2	102	73-120	
1,2-Dichloropropane	10.0	8.18	82	76-124	
Bromodichloromethane	10.0	9.20	92	66-130	
cis-1,3-Dichloropropene	10.0	9.97	100	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	14.2	71	45-145	
Toluene	10.0	9.70	97	80-123	
trans-1,3-Dichloropropene	10.0	10.3	103	65-125	
1,1,2-Trichloroethane	10.0	9.37	94	77-127	
Tetrachloroethene	10.0	9.98	100	70-135	
2-Hexanone	20.0	11.7	59	25-132	
Dibromochloromethane	10.0	10.6	106	60-140	
1,2-Dibromoethane (EDB)	10.0	8.66	87	74-123	
Chlorobenzene	10.0	10.1	101	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.3	103	63-140	
Ethylbenzene	10.0	10.0	100	72-126	
Xylenes, Total	20.0	19.5	97	76-128	
Styrene	10.0	9.17	92	71-127	
Bromoform	10.0	9.59	96	46-150	
1,1,2,2-Tetrachloroethane	10.0	8.53	85	62-125	
1,4-Dioxane	200	136 J	68	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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50128005.D Lab Sample ID: MB 180-131906/5  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: CHHP5 Date Analyzed: 01/28/2015 10:35  
 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 180-131906/8	50128008.D	01/28/2015 12:00
HD-CW-9-0/1-0	180-40617-1	50128013.D	01/28/2015 14:00
HD-CW-13-0/1-0	180-40617-2	50128014.D	01/28/2015 14:24
HD-QC6-0/1-2	180-40617-6	50128015.D	01/28/2015 14:49
HD-CW-15A-0/1-0	180-40617-3	50128016.D	01/28/2015 15:13
HD-CW-17-0/1-0	180-40617-4	50128017.D	01/28/2015 15:37
HD-CW-20-0/1-0	180-40617-5	50128019.D	01/28/2015 16:25

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50130004.D Lab Sample ID: MB 180-132193/4  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: CHHP5 Date Analyzed: 01/30/2015 10:58  
 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 180-132193/7	50130007.D	01/30/2015 12:28
HD-CW-13-0/1-0 DL	180-40617-2 DL	50130015.D	01/30/2015 15:45
HD-CW-17-0/1-0 DL	180-40617-4 DL	50130016.D	01/30/2015 16:10

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 51215001.D BFB Injection Date: 12/15/2014  
 Instrument ID: CHHP5 BFB Injection Time: 10:05  
 Analysis Batch No.: 128329

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	30.9
75	30.0 - 60.0 % of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	5.9
173	Less than 2.0 % of mass 174	0.5 (0.6)1
174	50.0 - 120.00 % of mass 95	72.5
175	5.0 - 9.0 % of mass 174	6.4 (8.8)1
176	95.0 - 101.0 % of mass 174	71.3 (98.4)1
177	5.0 - 9.0 % of mass 176	4.0 (5.6)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 180-128329/7	51215007.D	12/15/2014	14:33
	IC 180-128329/8	51215008.D	12/15/2014	14:57
	ICIS 180-128329/9	51215009.D	12/15/2014	15:21
	IC 180-128329/10	51215010.D	12/15/2014	15:45
	IC 180-128329/11	51215011.D	12/15/2014	16:09
	IC 180-128329/12	51215012.D	12/15/2014	16:33
	IC 180-128329/13	51215013.D	12/15/2014	16:57

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50127001.D BFB Injection Date: 01/28/2015  
 Instrument ID: CHHP5 BFB Injection Time: 07:58  
 Analysis Batch No.: 131906

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	26.7
75	30.0 - 60.0 % of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.3
173	Less than 2.0 % of mass 174	0.5 (0.6)1
174	50.0 - 120.00 % of mass 95	73.9
175	5.0 - 9.0 % of mass 174	5.7 (7.7)1
176	95.0 - 101.0 % of mass 174	73.0 (98.8)1
177	5.0 - 9.0 % of mass 176	4.7 (6.5)2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-131906/3	50128003.D	01/28/2015	09:13
	MB 180-131906/5	50128005.D	01/28/2015	10:35
	LCS 180-131906/8	50128008.D	01/28/2015	12:00
HD-CW-9-0/1-0	180-40617-1	50128013.D	01/28/2015	14:00
HD-CW-13-0/1-0	180-40617-2	50128014.D	01/28/2015	14:24
HD-QC6-0/1-2	180-40617-6	50128015.D	01/28/2015	14:49
HD-CW-15A-0/1-0	180-40617-3	50128016.D	01/28/2015	15:13
HD-CW-17-0/1-0	180-40617-4	50128017.D	01/28/2015	15:37
HD-CW-20-0/1-0	180-40617-5	50128019.D	01/28/2015	16:25



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 50130001.D BFB Injection Date: 01/30/2015  
 Instrument ID: CHHP5 BFB Injection Time: 09:11  
 Analysis Batch No.: 132193

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	22.1
75	30.0 - 60.0 % of mass 95	48.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.1
173	Less than 2.0 % of mass 174	0.4 (0.6)1
174	50.0 - 120.00 % of mass 95	73.3
175	5.0 - 9.0 % of mass 174	6.3 (8.5)1
176	95.0 - 101.0 % of mass 174	70.9 (96.7)1
177	5.0 - 9.0 % of mass 176	3.6 (5.1)2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-132193/2	50130002.D	01/30/2015	09:49
	MB 180-132193/4	50130004.D	01/30/2015	10:58
	LCS 180-132193/7	50130007.D	01/30/2015	12:28
HD-CW-13-0/1-0 DL	180-40617-2 DL	50130015.D	01/30/2015	15:45
HD-CW-17-0/1-0 DL	180-40617-4 DL	50130016.D	01/30/2015	16:10

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-131906/3 Date Analyzed: 01/28/2015 09:13  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 50128003.D Heated Purge: (Y/N) N  
 Calibration ID: 20600

	TBA		FB		CBZ			
	AREA #	RT #	AREA #	RT #	AREA #	RT #		
12/24 HOUR STD	174016	4.31	474967	7.28	108247	10.37		
UPPER LIMIT	348032	4.81	949934	7.78	216494	10.87		
LOWER LIMIT	87008	3.81	237484	6.78	54124	9.87		
LAB SAMPLE ID	CLIENT SAMPLE ID							
MB 180-131906/5			196224	4.30	520134	7.28	113079	10.36
LCS 180-131906/8			154775	4.30	470504	7.28	109410	10.36
180-40617-1	HD-CW-9-0/1-0		152841	4.30	432009	7.28	97206	10.37
180-40617-2	HD-CW-13-0/1-0		155862	4.30	436223	7.27	97478	10.36
180-40617-6	HD-QC6-0/1-2		137714	4.30	420834	7.28	91957	10.36
180-40617-3	HD-CW-15A-0/1-0		166857	4.30	447816	7.28	102767	10.36
180-40617-4	HD-CW-17-0/1-0		154360	4.29	420930	7.27	93790	10.36
180-40617-5	HD-CW-20-0/1-0		144842	4.30	400978	7.28	92337	10.37

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-131906/3 Date Analyzed: 01/28/2015 09:13  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 50128003.D Heated Purge: (Y/N) N  
 Calibration ID: 20600

	DCB		AREA #	RT #	AREA #	RT #	AREA #	RT #
	AREA #	RT #						
12/24 HOUR STD	151657	12.69						
UPPER LIMIT	303314	13.19						
LOWER LIMIT	75829	12.19						
LAB SAMPLE ID	CLIENT SAMPLE ID							
MB 180-131906/5		167894	12.69					
LCS 180-131906/8		158029	12.69					
180-40617-1	HD-CW-9-0/1-0	145255	12.69					
180-40617-2	HD-CW-13-0/1-0	140922	12.69					
180-40617-6	HD-QC6-0/1-2	133391	12.68					
180-40617-3	HD-CW-15A-0/1-0	142512	12.69					
180-40617-4	HD-CW-17-0/1-0	130210	12.69					
180-40617-5	HD-CW-20-0/1-0	128024	12.69					

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-132193/2 Date Analyzed: 01/30/2015 09:49  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 50130002.D Heated Purge: (Y/N) N  
 Calibration ID: 20600

	TBA		FB		CBZ		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	156542	4.31	473422	7.27	106847	10.37	
UPPER LIMIT	313084	4.81	946844	7.77	213694	10.87	
LOWER LIMIT	78271	3.81	236711	6.77	53424	9.87	
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-132193/4	179087	4.30	441468	7.28	100911	10.37	
LCS 180-132193/7	156868	4.30	469885	7.27	107510	10.37	
180-40617-2 DL	HD-CW-13-0/1-0 DL	163794	4.28	411956	7.28	93872	10.36
180-40617-4 DL	HD-CW-17-0/1-0 DL	166924	4.30	408439	7.28	93707	10.36

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 180-132193/2 Date Analyzed: 01/30/2015 09:49  
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)  
 Lab File ID (Standard): 50130002.D Heated Purge: (Y/N) N  
 Calibration ID: 20600

	DCB					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	148407	12.69				
UPPER LIMIT	296814	13.19				
LOWER LIMIT	74204	12.19				
LAB SAMPLE ID	CLIENT SAMPLE ID					
MB 180-132193/4		146297	12.69			
LCS 180-132193/7		154548	12.68			
180-40617-2 DL	HD-CW-13-0/1-0 DL	129118	12.68			
180-40617-4 DL	HD-CW-17-0/1-0 DL	135259	12.68			

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-9-0/1-0 Lab Sample ID: 180-40617-1  
 Matrix: Water Lab File ID: 50128013.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:25  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 14:00  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 12.5  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13	U	13	3.5
75-01-4	Vinyl chloride	13	U	13	2.8
74-83-9	Bromomethane	13	U	13	3.9
75-00-3	Chloroethane	13	U	13	2.7
75-35-4	1,1-Dichloroethene	6.4	J	13	3.7
67-64-1	Acetone	63	U	63	31
75-15-0	Carbon disulfide	13	U	13	2.7
75-09-2	Methylene Chloride	13	U	13	1.6
156-60-5	trans-1,2-Dichloroethene	13	U	13	2.1
1634-04-4	Methyl tert-butyl ether	13	U	13	2.3
75-34-3	1,1-Dichloroethane	5.0	J	13	1.5
156-59-2	cis-1,2-Dichloroethene	170		13	3.0
74-97-5	Bromochloromethane	13	U	13	2.3
78-93-3	2-Butanone (MEK)	63	U	63	6.8
67-66-3	Chloroform	13	U	13	2.1
71-55-6	1,1,1-Trichloroethane	21		13	3.6
56-23-5	Carbon tetrachloride	13	U	13	1.7
71-43-2	Benzene	13	U	13	1.3
107-06-2	1,2-Dichloroethane	13	U	13	2.6
79-01-6	Trichloroethene	130		13	1.8
78-87-5	1,2-Dichloropropane	13	U	13	1.2
75-27-4	Bromodichloromethane	13	U	13	1.6
10061-01-5	cis-1,3-Dichloropropene	13	U	13	2.3
108-10-1	4-Methyl-2-pentanone (MIBK)	63	U	63	6.6
108-88-3	Toluene	13	U	13	1.9
10061-02-6	trans-1,3-Dichloropropene	13	U	13	1.9
79-00-5	1,1,2-Trichloroethane	13	U	13	2.5
127-18-4	Tetrachloroethene	410		13	1.9
591-78-6	2-Hexanone	63	U	63	2.0
124-48-1	Dibromochloromethane	13	U	13	1.7
106-93-4	1,2-Dibromoethane (EDB)	13	U	13	2.3
108-90-7	Chlorobenzene	1.8	J	13	1.7
630-20-6	1,1,1,2-Tetrachloroethane	13	U	13	3.5
100-41-4	Ethylbenzene	13	U	13	2.8
1330-20-7	Xylenes, Total	38	U	38	6.1
100-42-5	Styrene	13	U	13	1.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-9-0/1-0 Lab Sample ID: 180-40617-1  
 Matrix: Water Lab File ID: 50128013.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:25  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 14:00  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 12.5  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	13	U	13	2.4
79-34-5	1,1,2,2-Tetrachloroethane	13	U	13	2.5
107-13-1	Acrylonitrile	250	U	250	6.8
123-91-1	1,4-Dioxane	2500	U	2500	430

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	98		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	119		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D  
 Lims ID: 180-40617-E-1 Lab Sample ID: 180-40617-1  
 Client ID: HD-CW-9-0/1-0  
 Sample Type: Client  
 Inject. Date: 28-Jan-2015 14:00:30 ALS Bottle#: 12 Worklist Smp#: 13  
 Purge Vol: 5.000 mL Dil. Factor: 12.5000  
 Sample Info: 180-40617-E-1, 12.5x  
 Misc. Info.: 180-0005445-013  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 16:24:47 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 16:24:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.303	4.308	-0.005	89	152841	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.276	0.002	99	432009	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.367	0.001	98	97206	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	98	145255	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.534	-0.005	93	109164	59.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.899	0.002	92	145065	48.1	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	95	396611	49.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.535	-0.005	84	155720	50.5	
12 Chloromethane	50		1.783				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.416				ND	
22 1,1-Dichloroethene	96	3.396	3.383	0.013	72	5978	2.54	
24 Acetone	43		3.499				ND	
26 Carbon disulfide	76		3.675				ND	
31 Methylene Chloride	84		4.156				ND	
33 Acrylonitrile	53		4.557				ND	
34 trans-1,2-Dichloroethene	96		4.563				ND	
35 Methyl tert-butyl ether	73		4.588				ND	
37 1,1-Dichloroethane	63	5.179	5.178	0.001	95	11109	2.00	
45 cis-1,2-Dichloroethene	96	5.939	5.938	0.001	84	179224	69.6	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.224				ND	
52 Chloroform	83		6.352				ND	
53 1,1,1-Trichloroethane	97	6.536	6.534	0.002	48	22411	8.24	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.990				ND	
64 Trichloroethene	130	7.673	7.666	0.007	95	116328	50.9	
67 1,2-Dichloropropane	63		7.903				ND	
70 1,4-Dioxane	88		8.049				ND	



Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.657				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.223				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.541	9.539	0.002	93	315147	165.6	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.904				ND	
87 Chlorobenzene	112	10.392	10.391	0.001	26	4471	0.7122	
89 1,1,1,2-Tetrachloroethane	131		10.476				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.622				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.218				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

Worklist Smp#: 13

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

Purge Vol: 5.000 mL

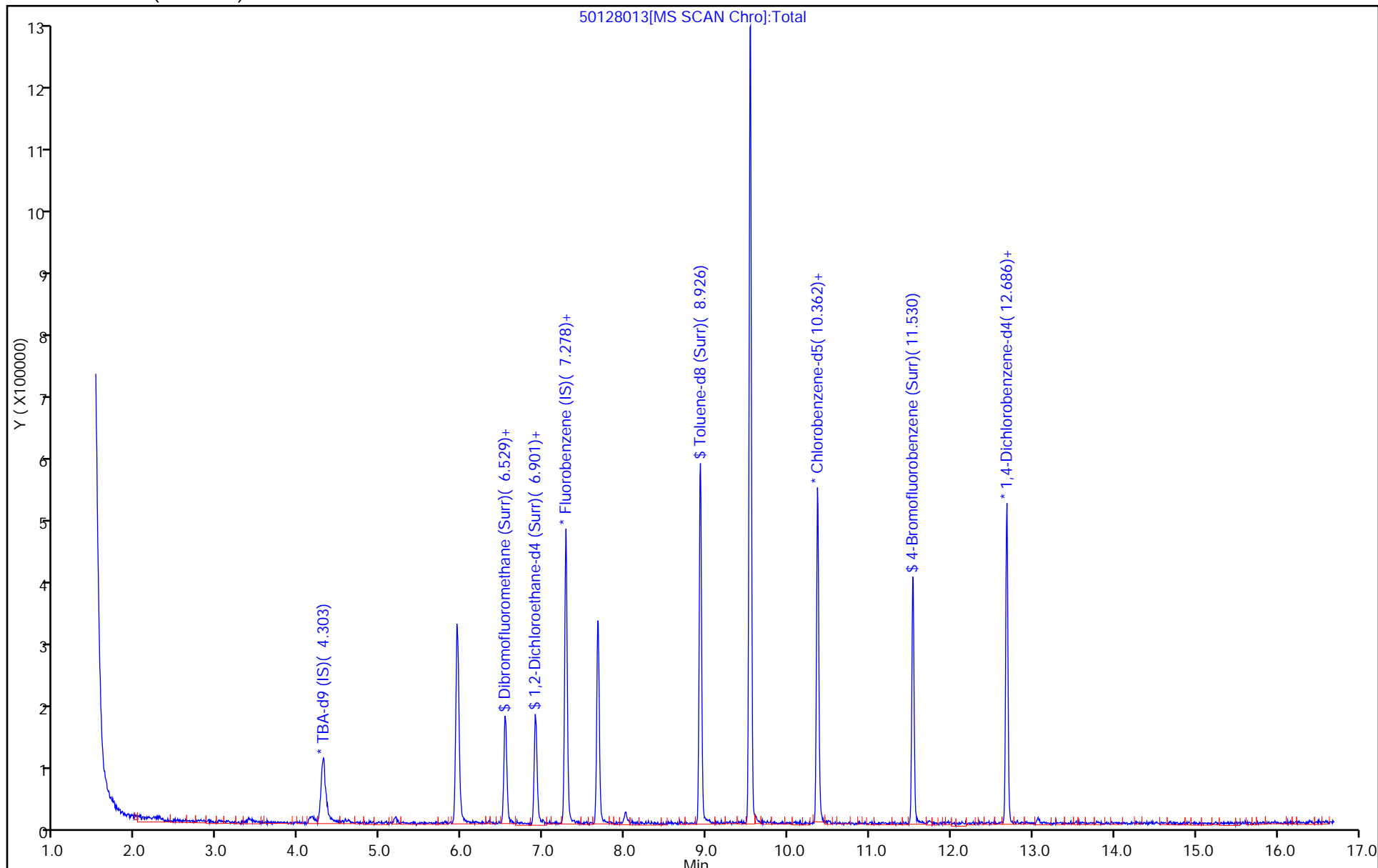
Dil. Factor: 12.5000

ALS Bottle#: 12

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

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

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 12.5000

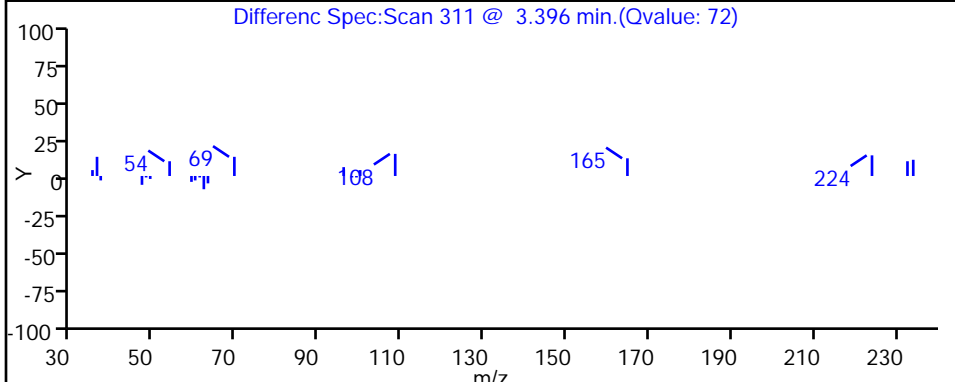
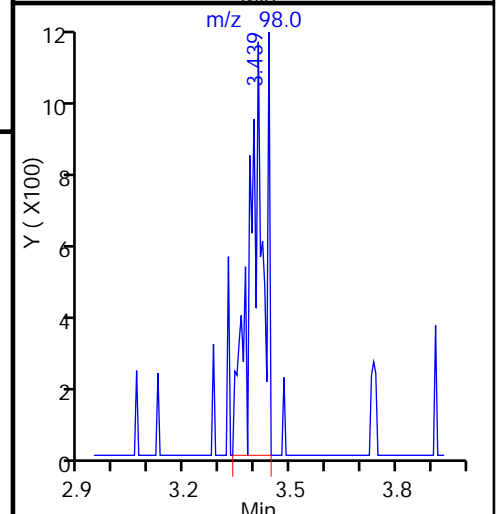
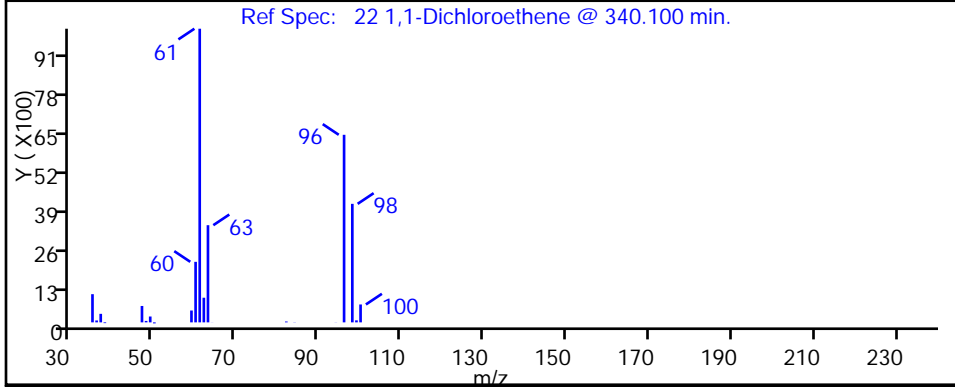
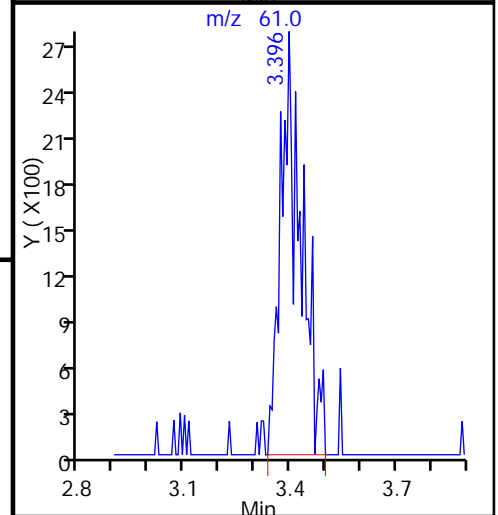
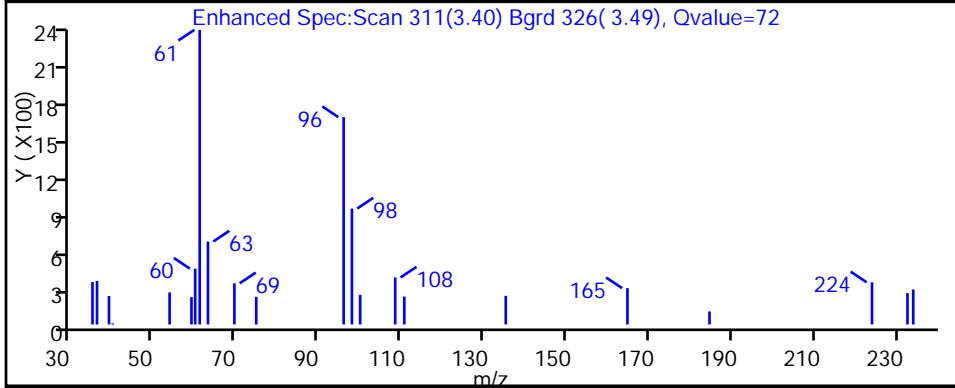
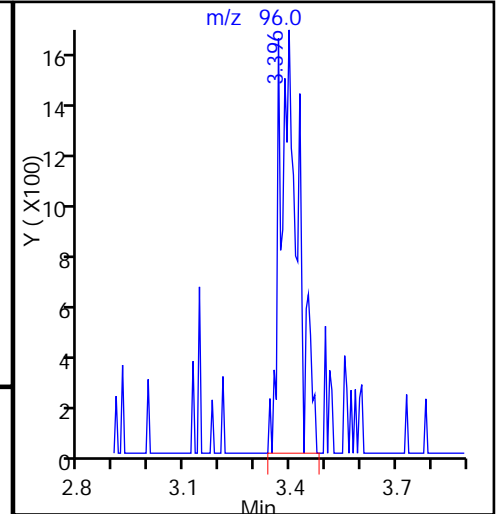
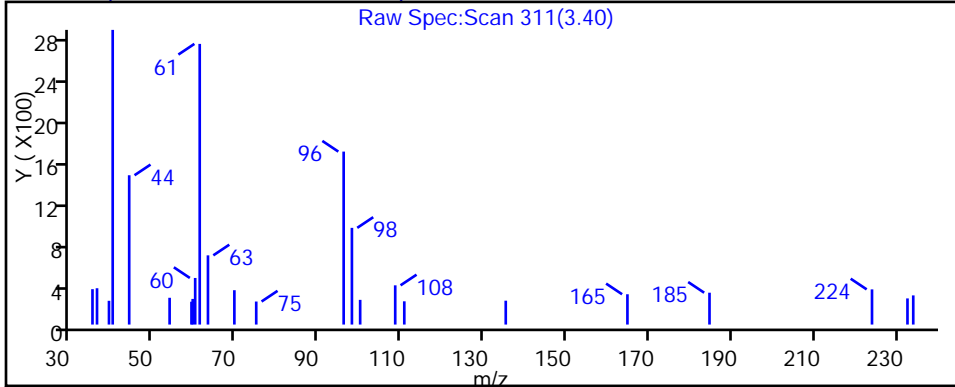
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

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

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 12.5000

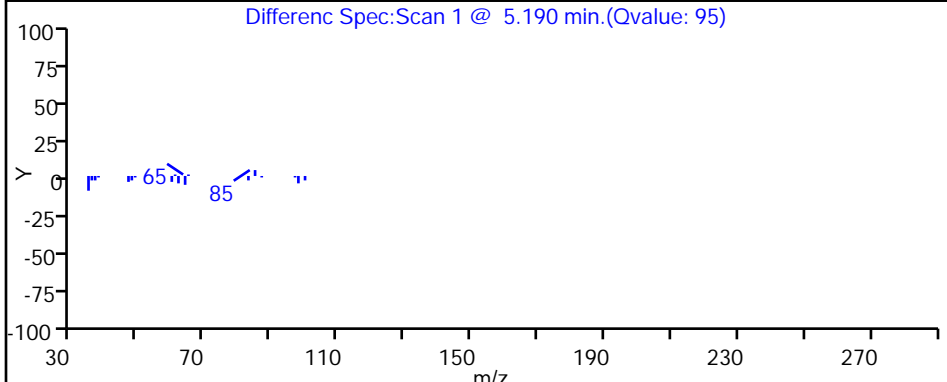
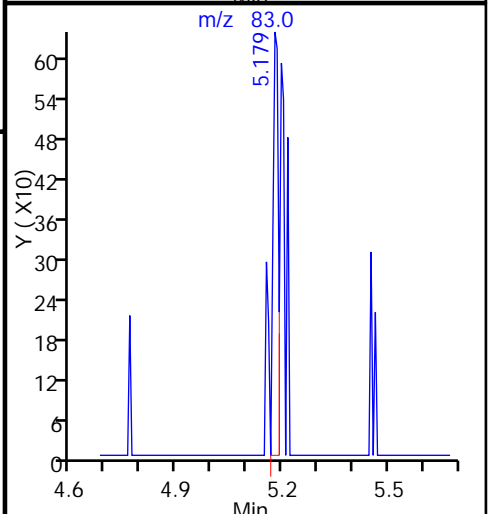
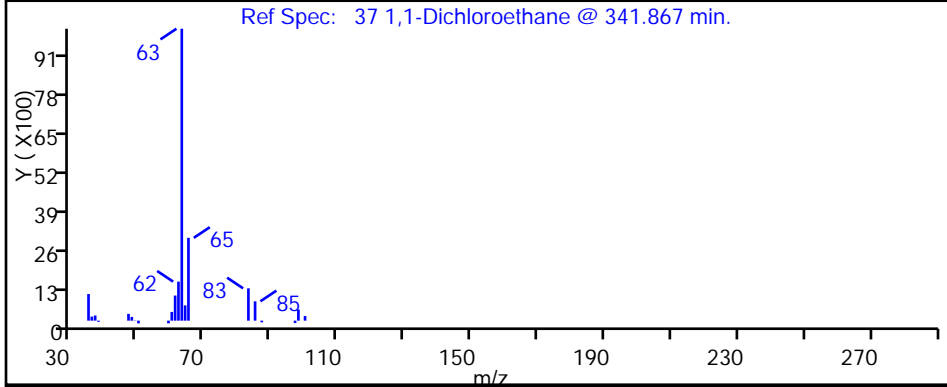
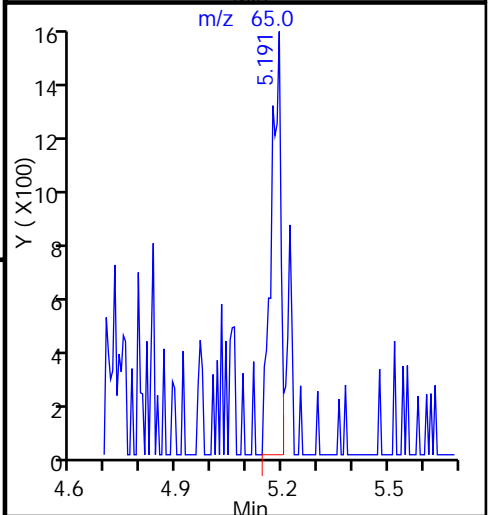
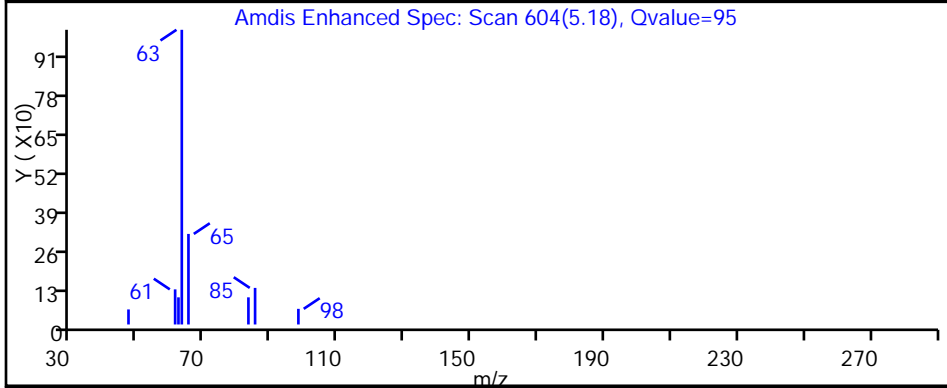
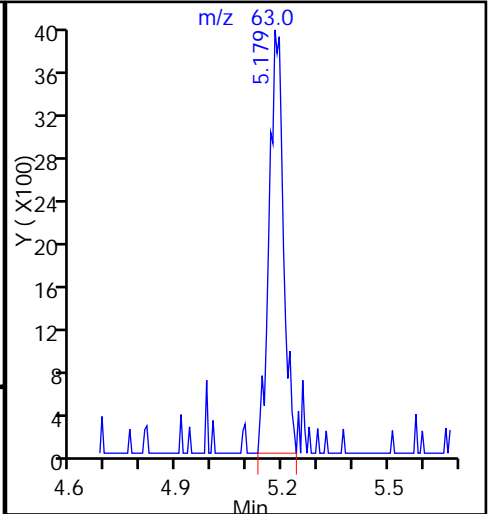
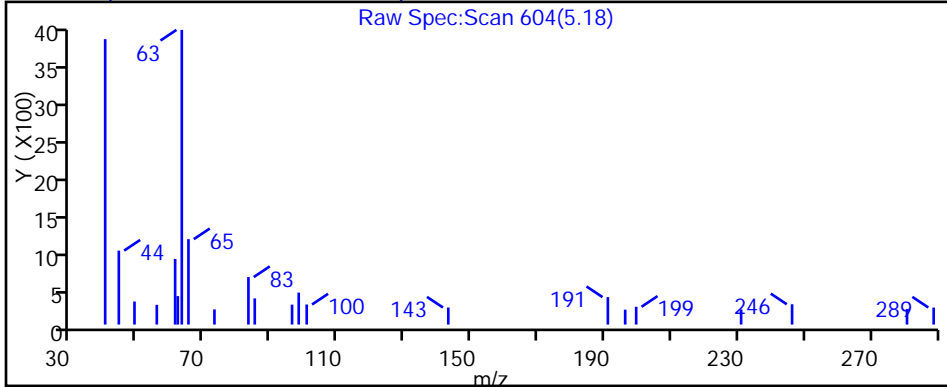
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

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

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 12.5000

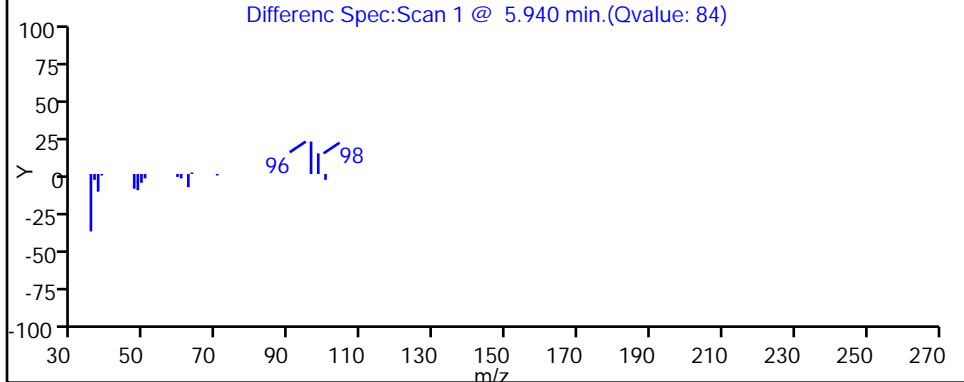
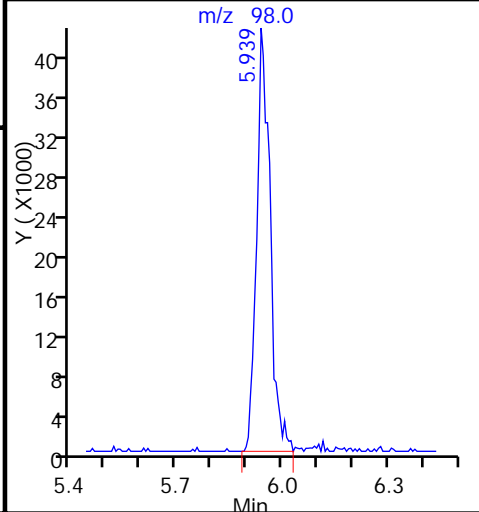
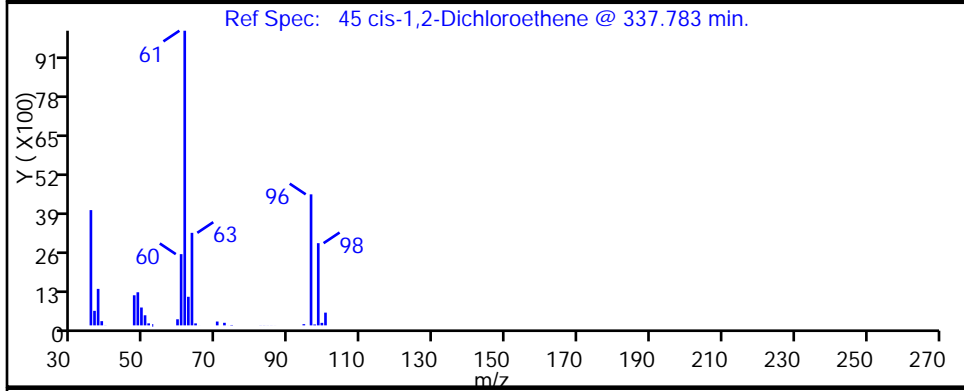
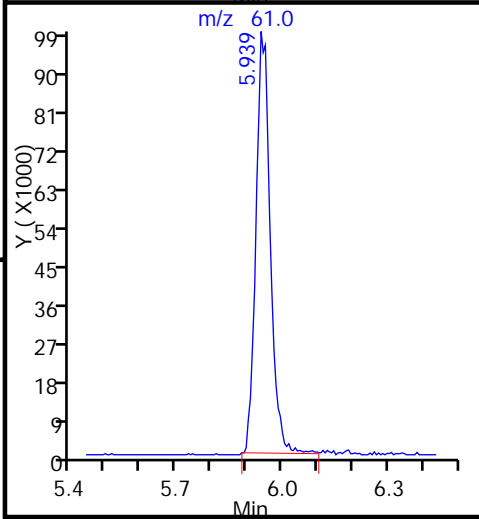
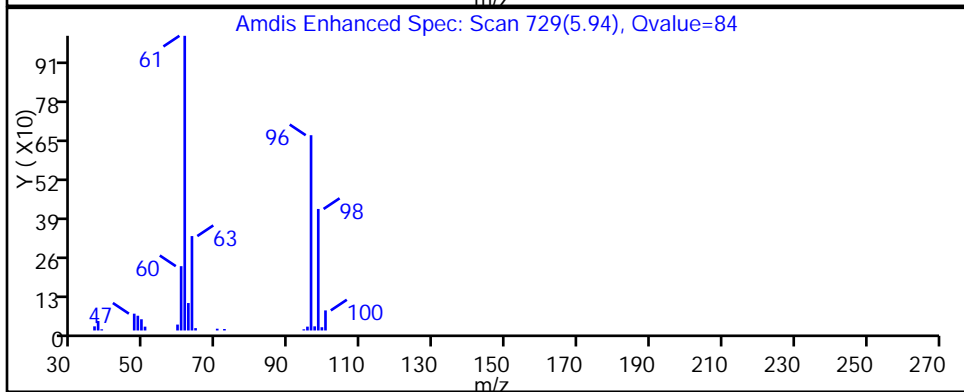
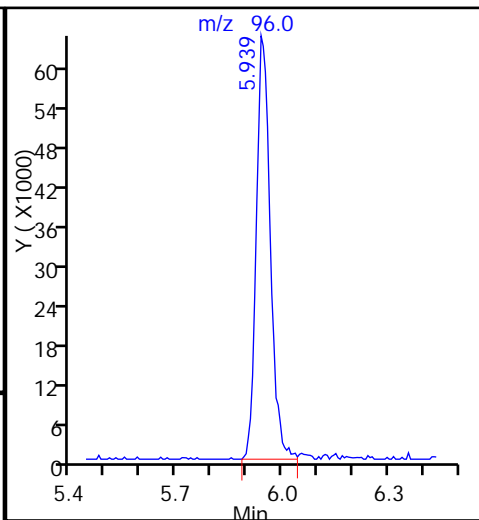
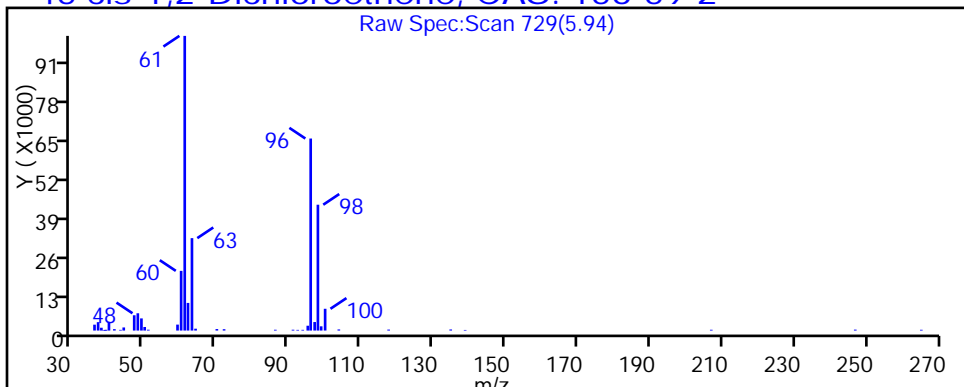
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

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

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 12.5000

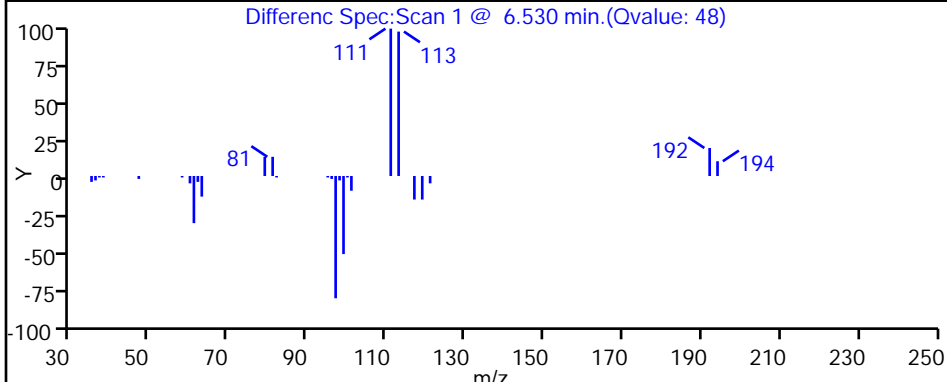
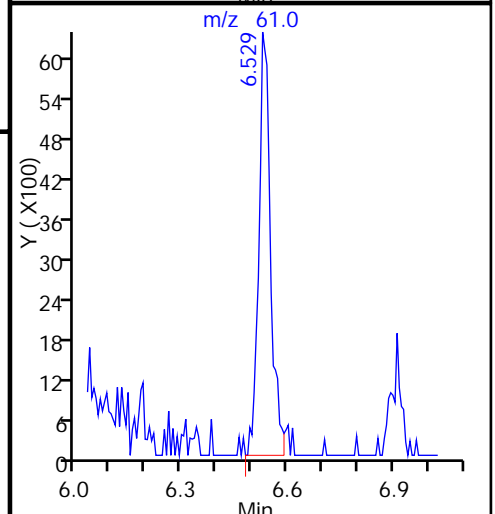
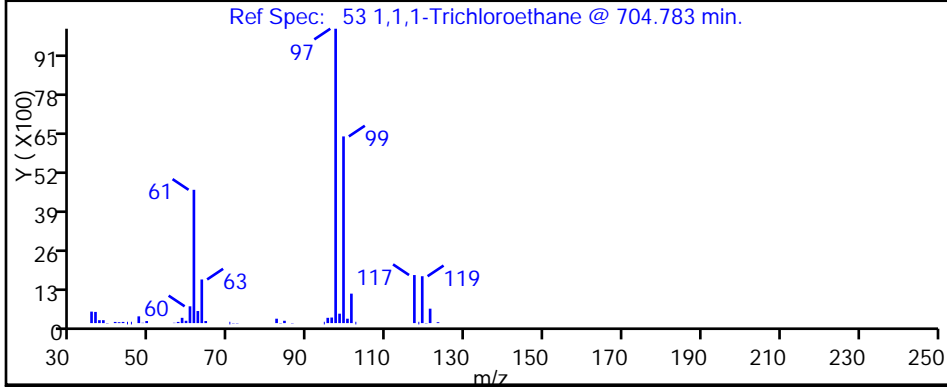
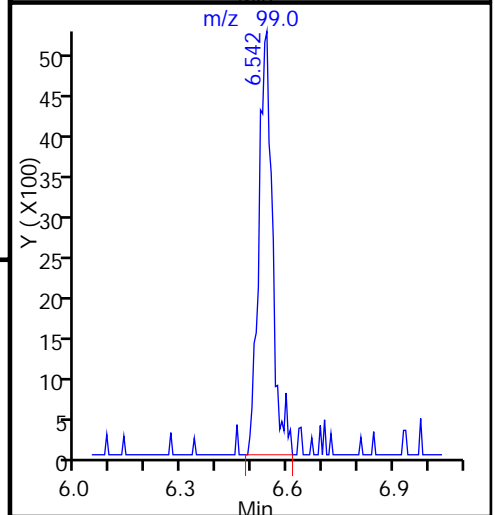
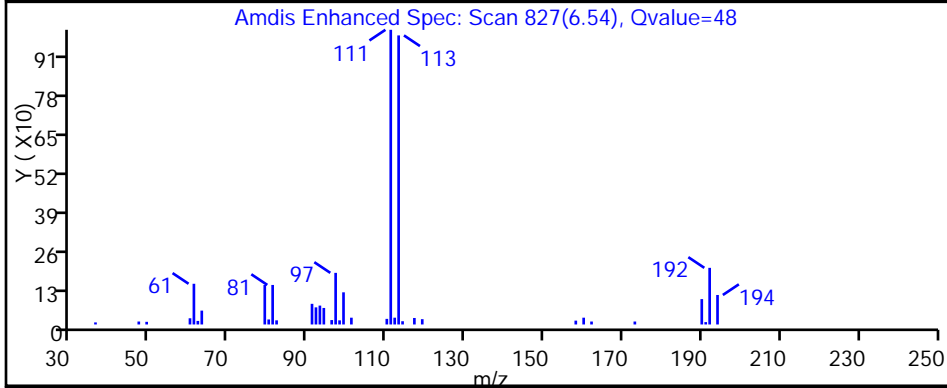
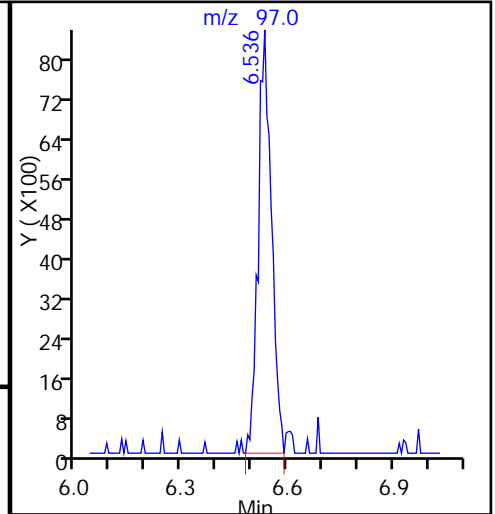
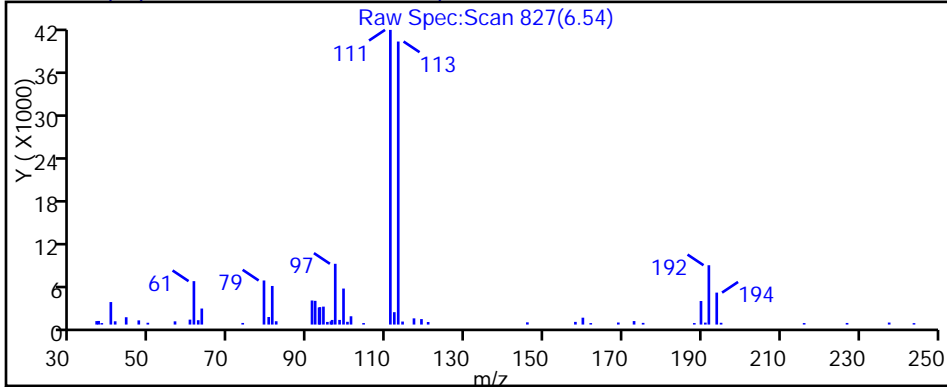
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

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

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 12.5000

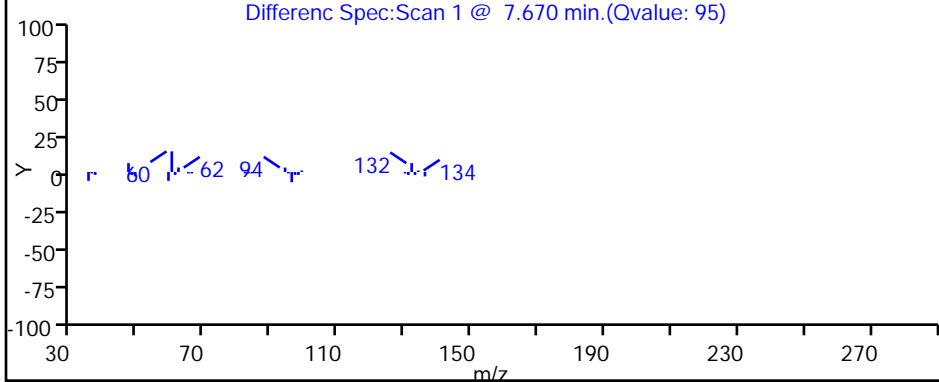
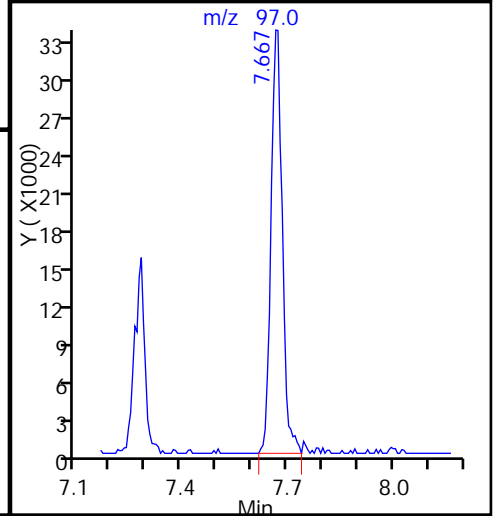
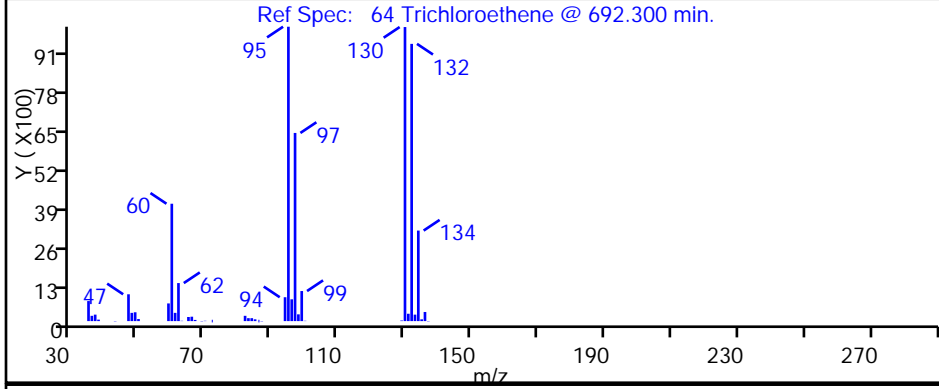
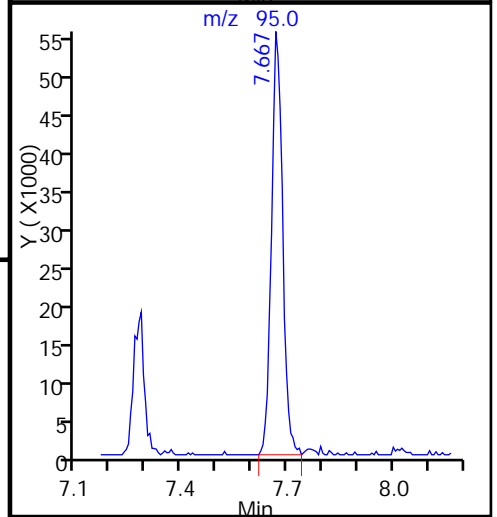
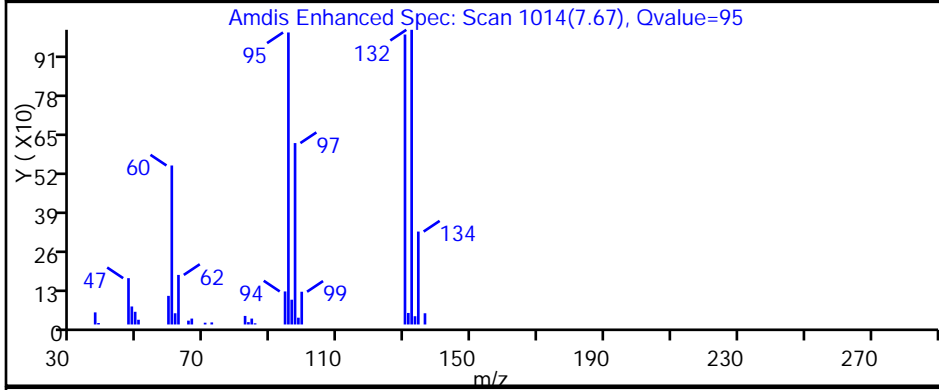
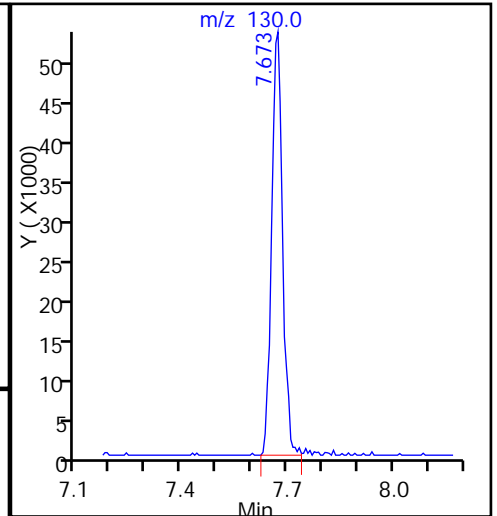
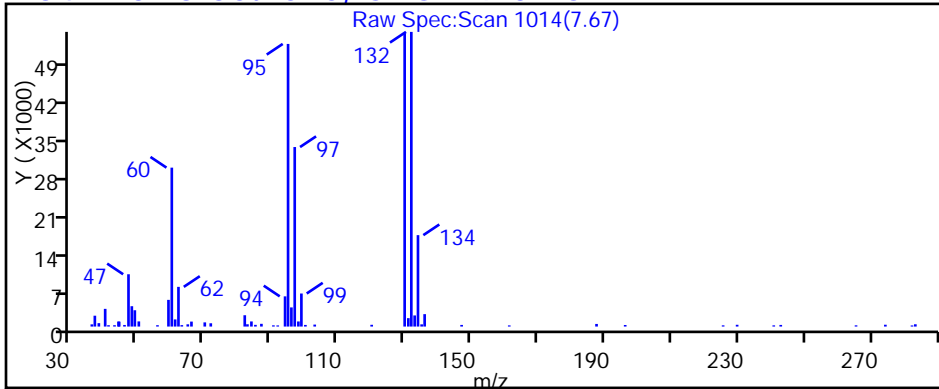
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

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

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 12.5000

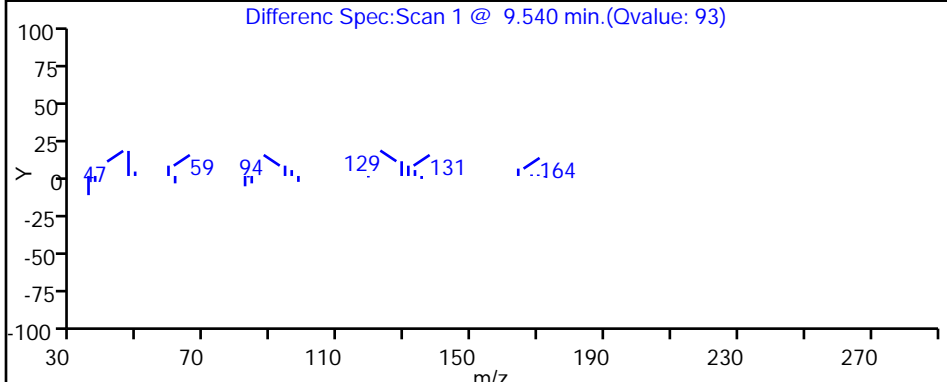
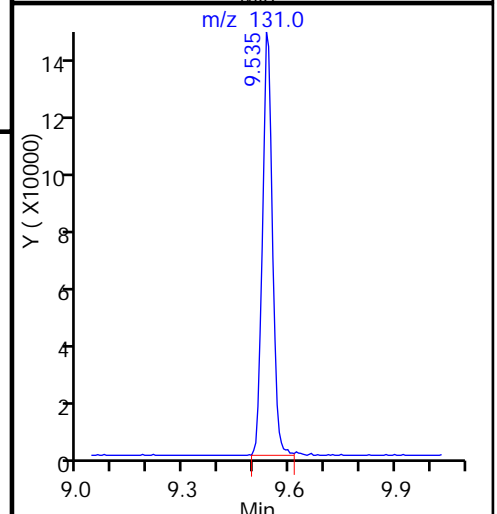
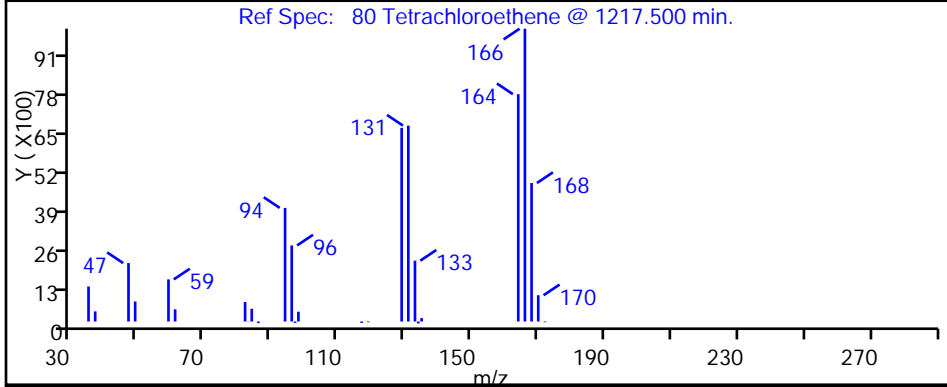
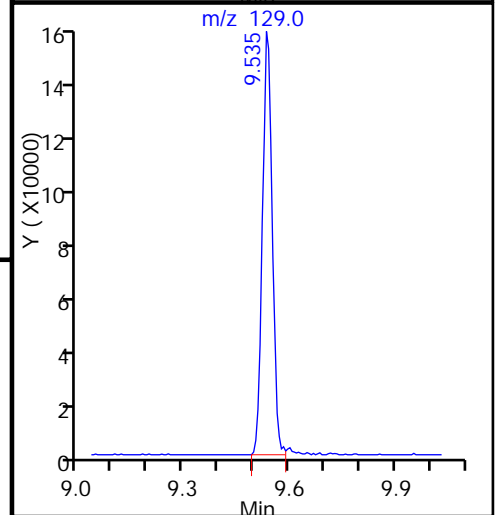
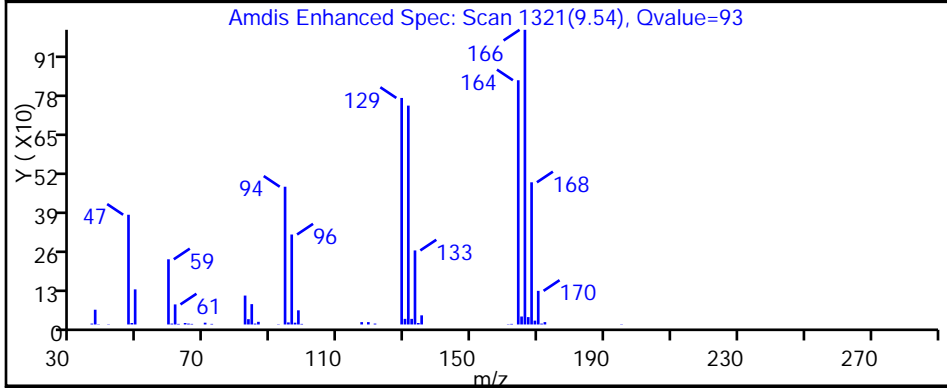
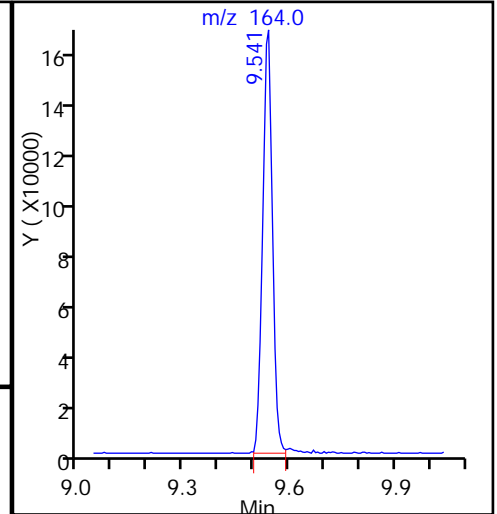
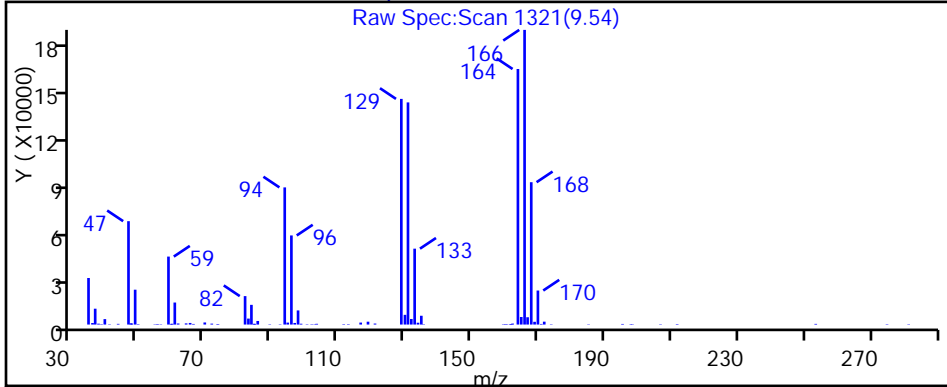
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128013.D

Injection Date: 28-Jan-2015 14:00:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-1

Lab Sample ID: 180-40617-1

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

Operator ID: 001562

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 5.000 mL

Dil. Factor: 12.5000

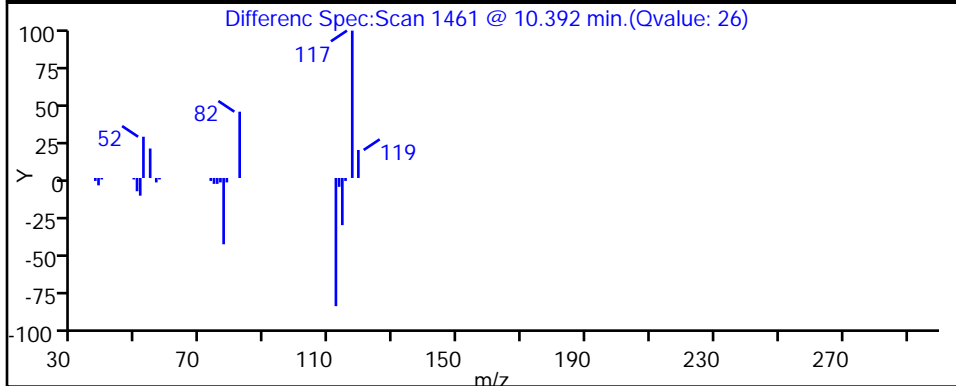
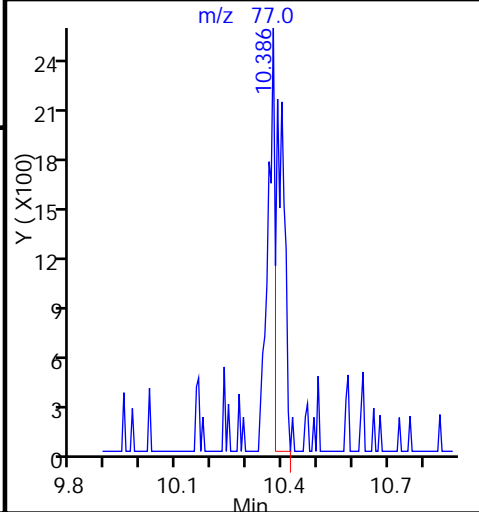
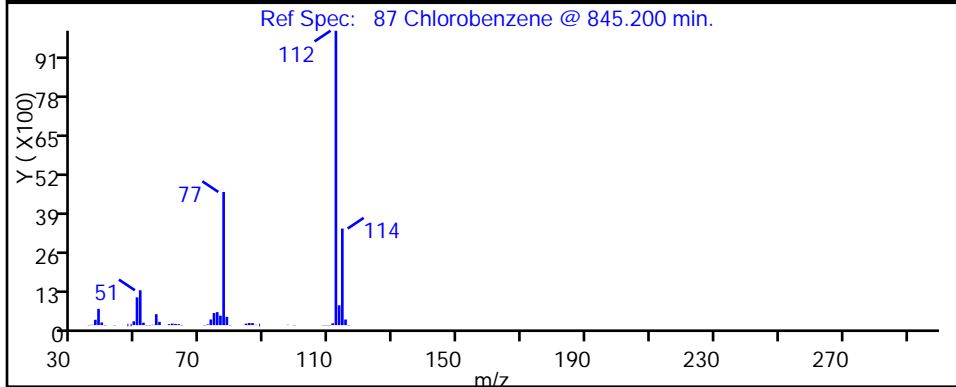
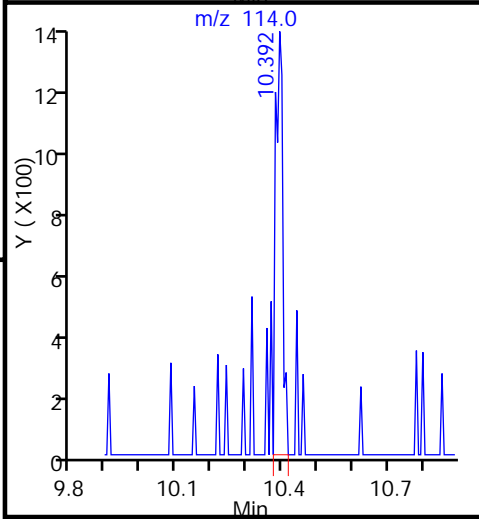
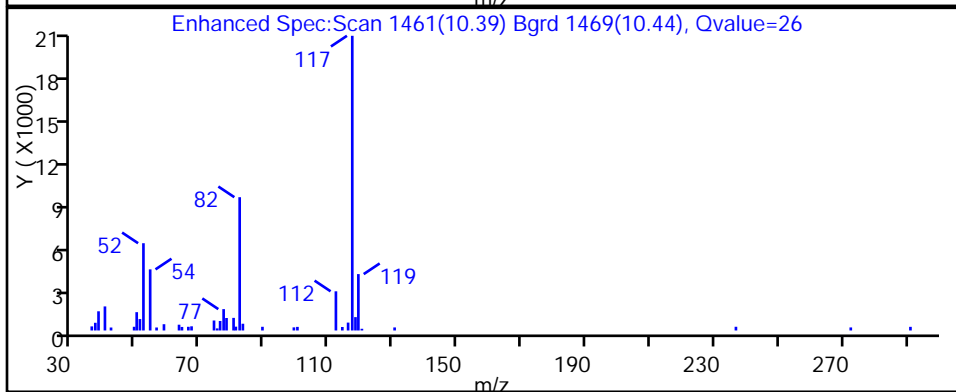
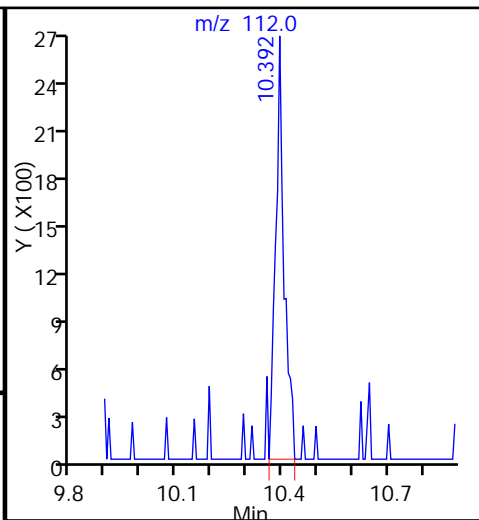
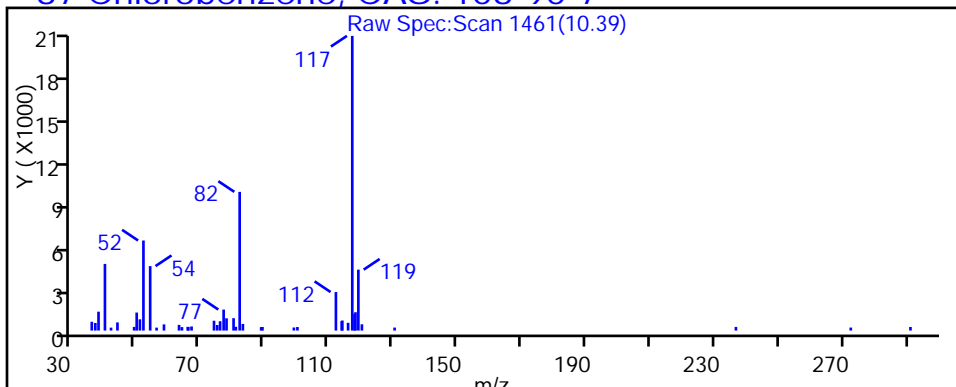
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

87 Chlorobenzene, CAS: 108-90-7



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-13-0/1-0 Lab Sample ID: 180-40617-2  
 Matrix: Water Lab File ID: 50128014.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:37  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 14:24  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 25  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	25	U	25	7.1
75-01-4	Vinyl chloride	23	J	25	5.7
74-83-9	Bromomethane	25	U	25	7.8
75-00-3	Chloroethane	25	U	25	5.4
75-35-4	1,1-Dichloroethene	19	J	25	7.4
67-64-1	Acetone	130	U	130	63
75-15-0	Carbon disulfide	25	U	25	5.3
75-09-2	Methylene Chloride	25	U	25	3.1
156-60-5	trans-1,2-Dichloroethene	25	U	25	4.2
1634-04-4	Methyl tert-butyl ether	25	U	25	4.6
75-34-3	1,1-Dichloroethane	8.7	J	25	2.9
156-59-2	cis-1,2-Dichloroethene	1200	E	25	5.9
74-97-5	Bromochloromethane	25	U	25	4.5
78-93-3	2-Butanone (MEK)	130	U	130	14
67-66-3	Chloroform	25	U	25	4.3
71-55-6	1,1,1-Trichloroethane	39		25	7.2
56-23-5	Carbon tetrachloride	25	U	25	3.4
71-43-2	Benzene	25	U	25	2.6
107-06-2	1,2-Dichloroethane	25	U	25	5.3
79-01-6	Trichloroethene	540		25	3.6
78-87-5	1,2-Dichloropropane	25	U	25	2.4
75-27-4	Bromodichloromethane	25	U	25	3.3
10061-01-5	cis-1,3-Dichloropropene	25	U	25	4.7
108-10-1	4-Methyl-2-pentanone (MIBK)	130	U	130	13
108-88-3	Toluene	25	U	25	3.8
10061-02-6	trans-1,3-Dichloropropene	25	U	25	3.7
79-00-5	1,1,2-Trichloroethane	25	U	25	5.0
127-18-4	Tetrachloroethene	430		25	3.7
591-78-6	2-Hexanone	130	U	130	4.0
124-48-1	Dibromochloromethane	25	U	25	3.4
106-93-4	1,2-Dibromoethane (EDB)	25	U	25	4.5
108-90-7	Chlorobenzene	25	U	25	3.4
630-20-6	1,1,1,2-Tetrachloroethane	25	U	25	6.9
100-41-4	Ethylbenzene	25	U	25	5.7
1330-20-7	Xylenes, Total	75	U	75	12
100-42-5	Styrene	25	U	25	2.4

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-13-0/1-0 Lab Sample ID: 180-40617-2  
 Matrix: Water Lab File ID: 50128014.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:37  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 14:24  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 25  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	25	U	25	4.8
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	5.0
107-13-1	Acrylonitrile	500	U	500	14
123-91-1	1,4-Dioxane	5000	U	5000	860

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	99		71-118
460-00-4	4-Bromofluorobenzene (Surr)	99		70-118
1868-53-7	Dibromofluoromethane (Surr)	116		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D  
 Lims ID: 180-40617-C-2 Lab Sample ID: 180-40617-2  
 Client ID: HD-CW-13-0/1-0  
 Sample Type: Client  
 Inject. Date: 28-Jan-2015 14:24:30 ALS Bottle#: 13 Worklist Smp#: 14  
 Purge Vol: 5.000 mL Dil. Factor: 25.0000  
 Sample Info: 180-40617-C-2, 25x  
 Misc. Info.: 180-0005445-014  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 16:27:39 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 16:27:39

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.297	4.308	-0.011	88	155862	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.276	-0.005	99	436223	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	97	97478	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	98	140922	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.534	-0.005	92	107560	57.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.899	0.001	93	144521	47.4	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	95	400361	49.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.535	0.001	84	152450	49.3	
12 Chloromethane	50		1.783				ND	
13 Vinyl chloride	62	1.900	1.911	-0.011	71	16017	4.52	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.416				ND	
22 1,1-Dichloroethene	96	3.396	3.383	0.013	93	8946	3.76	
24 Acetone	43		3.499				ND	
26 Carbon disulfide	76		3.675				ND	
31 Methylene Chloride	84		4.156				ND	
33 Acrylonitrile	53		4.557				ND	
34 trans-1,2-Dichloroethene	96	4.576	4.563	0.013	57	1900	0.7898	
35 Methyl tert-butyl ether	73		4.588				ND	
37 1,1-Dichloroethane	63	5.179	5.178	0.001	26	9769	1.75	
45 cis-1,2-Dichloroethene	96	5.945	5.938	0.007	84	612349	235.5	E
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.224				ND	
52 Chloroform	83		6.352				ND	
53 1,1,1-Trichloroethane	97	6.529	6.534	-0.005	46	21570	7.86	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.990				ND	
64 Trichloroethene	130	7.667	7.666	0.001	97	250844	108.6	
67 1,2-Dichloropropane	63		7.903				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.657				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.223				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.541	9.539	0.001	94	162367	85.1	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.904				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.476				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.622				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.218				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

### QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

### Reagents:

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Worklist Smp#: 14

Client ID: HD-CW-13-0/1-0

Purge Vol: 5.000 mL

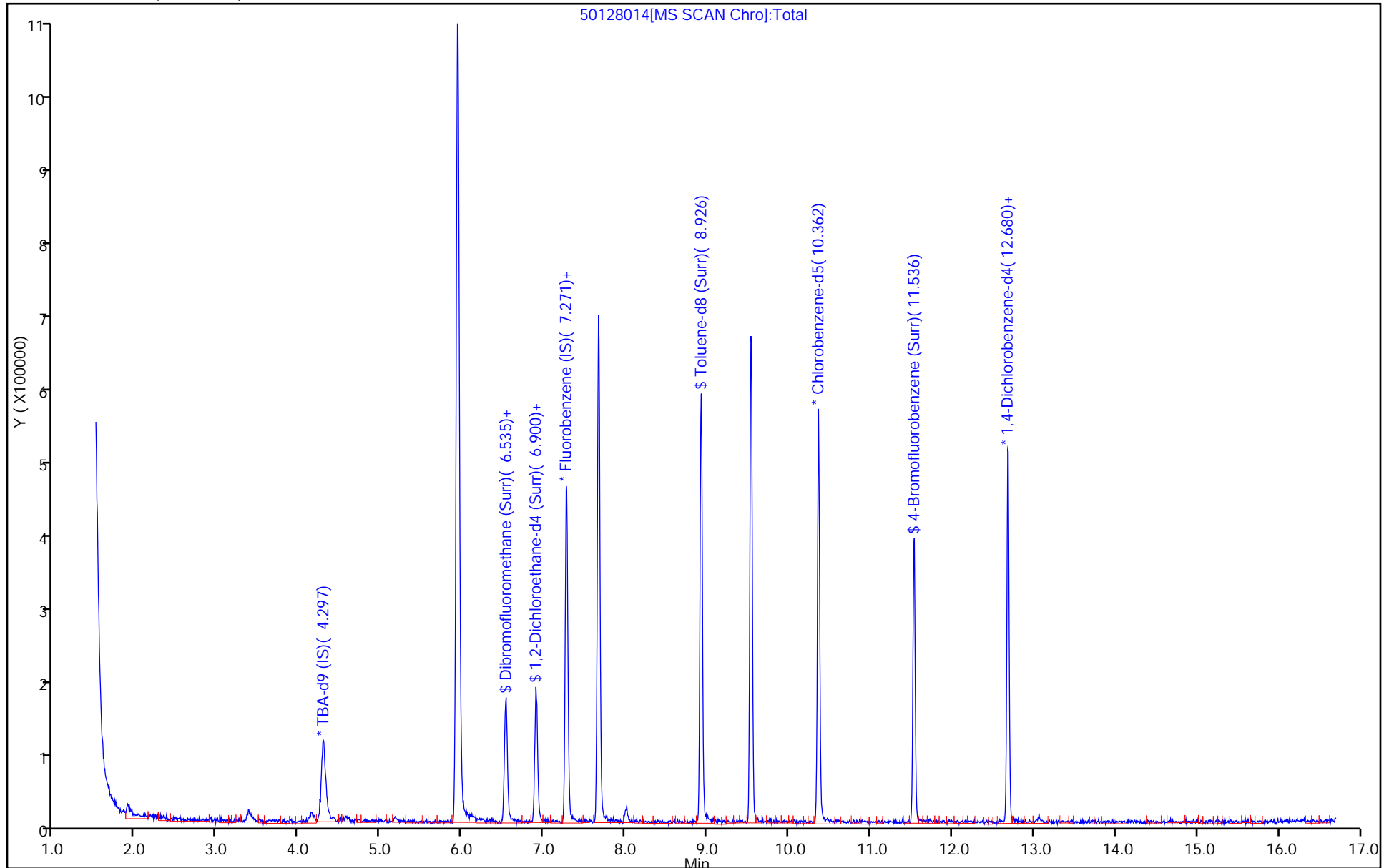
Dil. Factor: 25.0000

ALS Bottle#: 13

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 25.0000

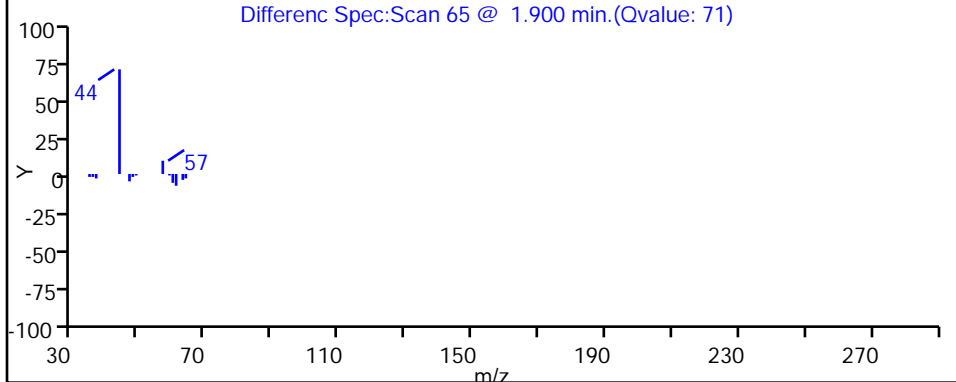
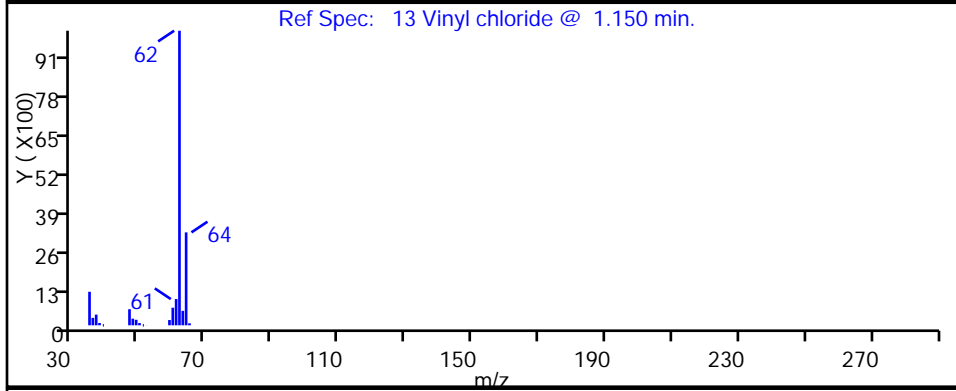
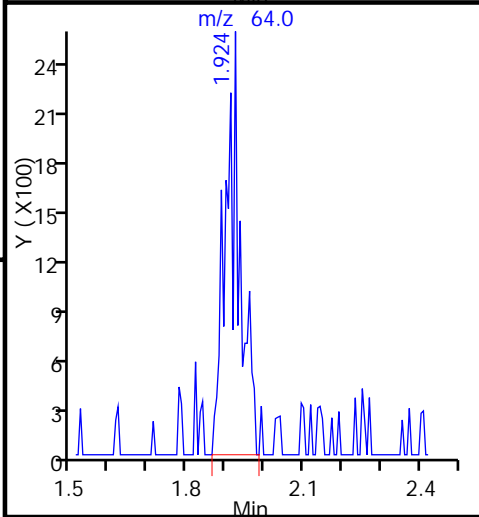
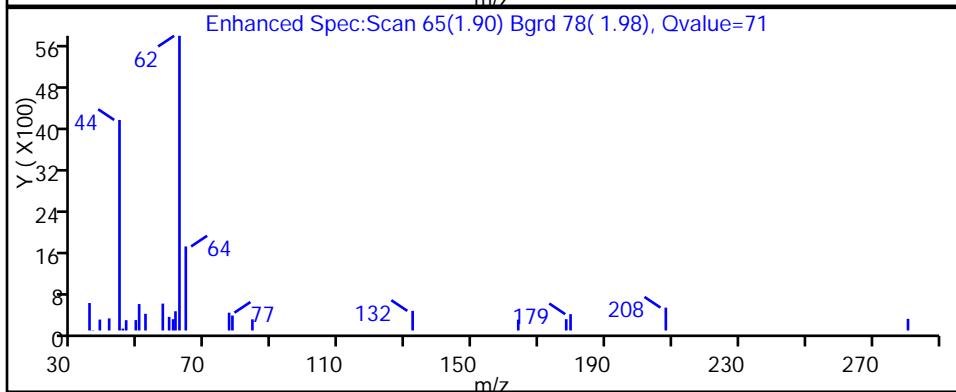
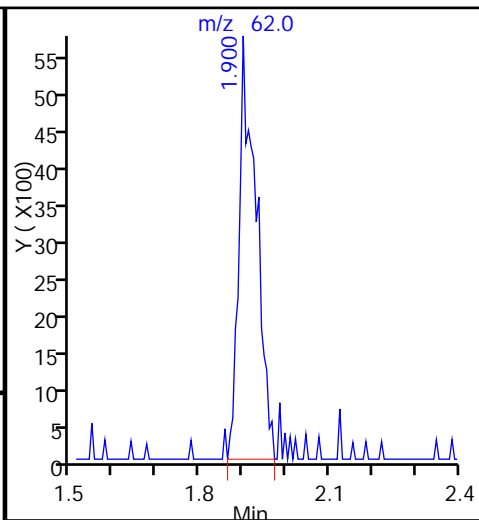
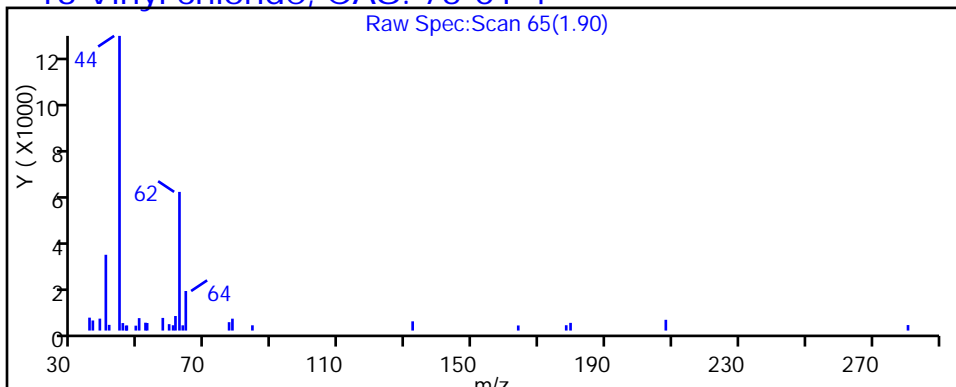
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 25.0000

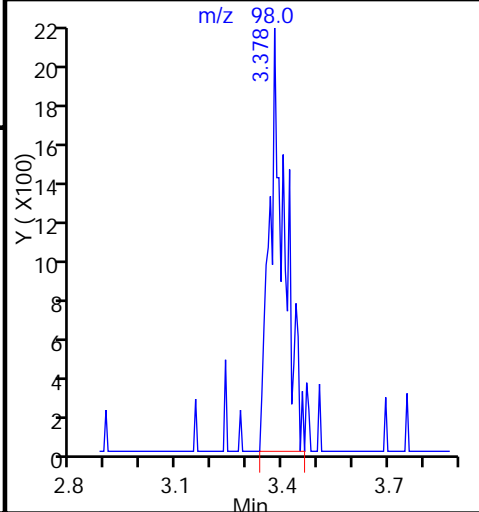
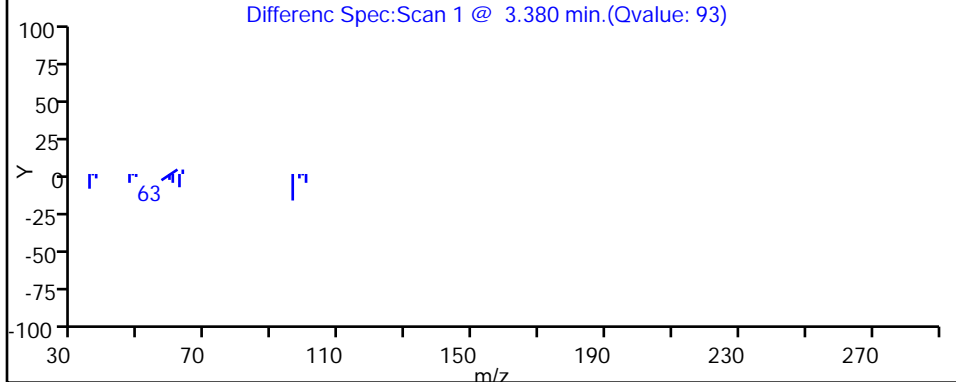
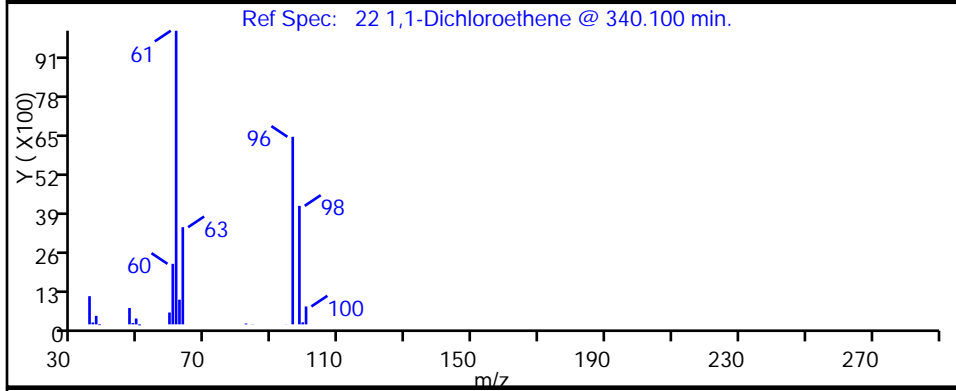
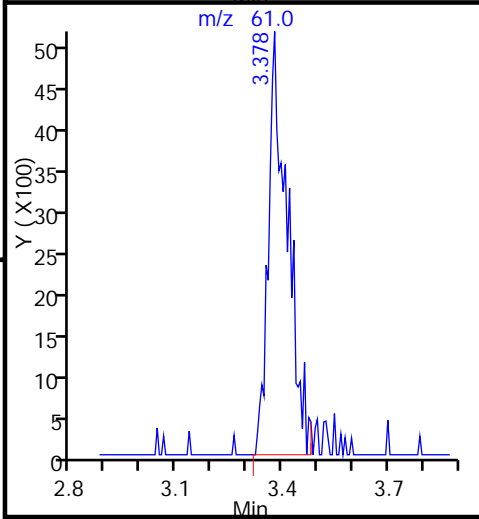
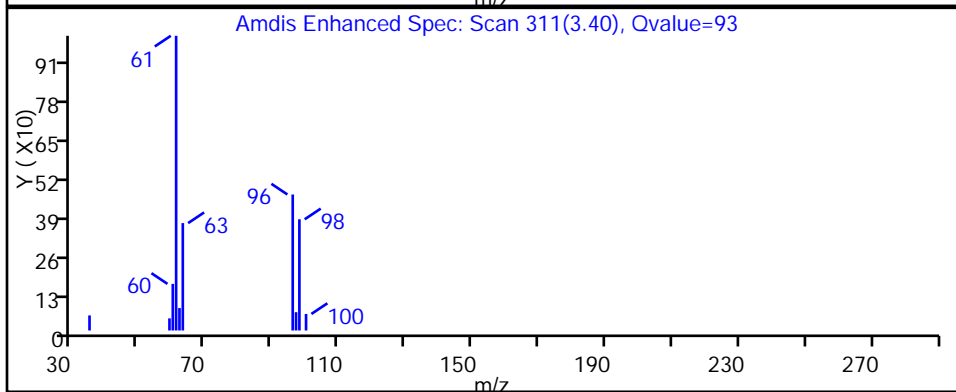
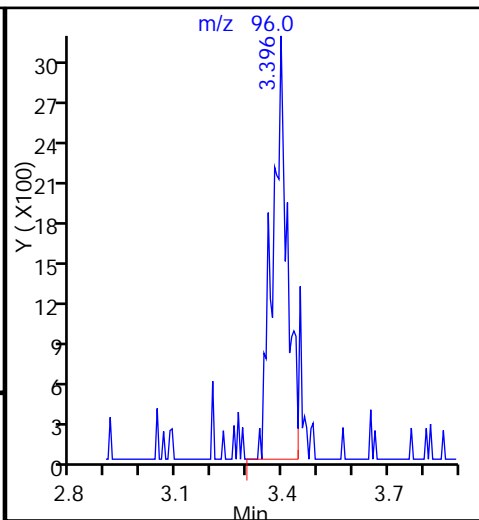
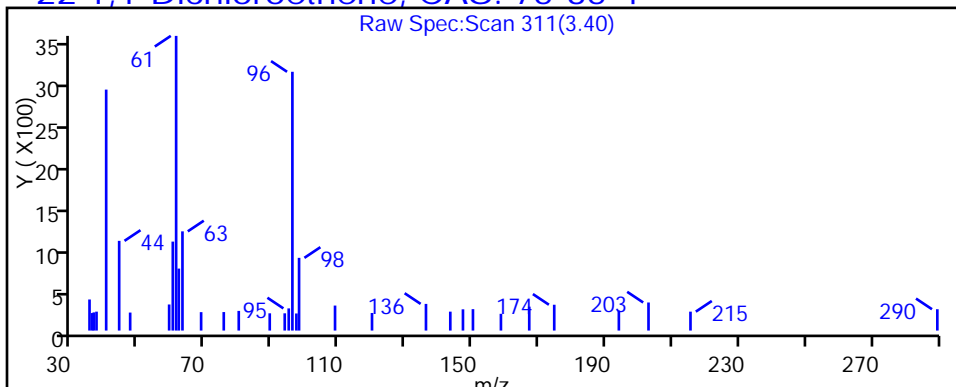
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 25.0000

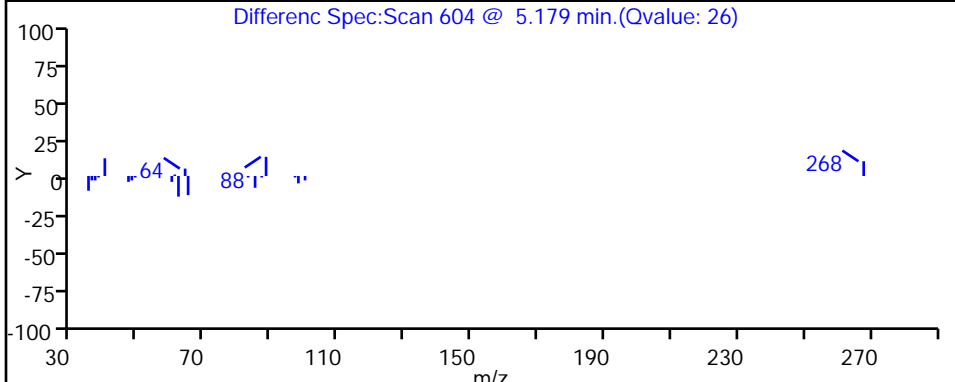
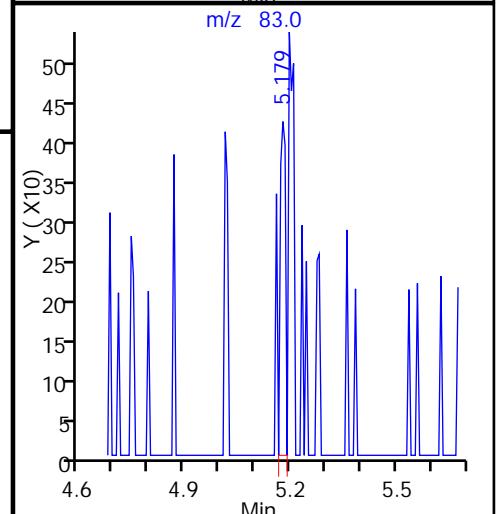
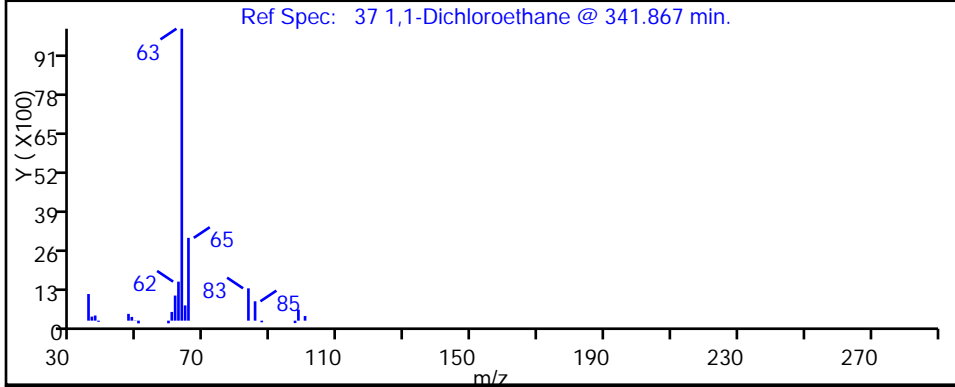
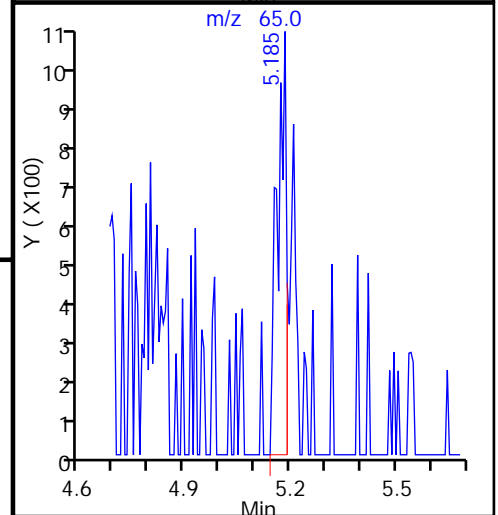
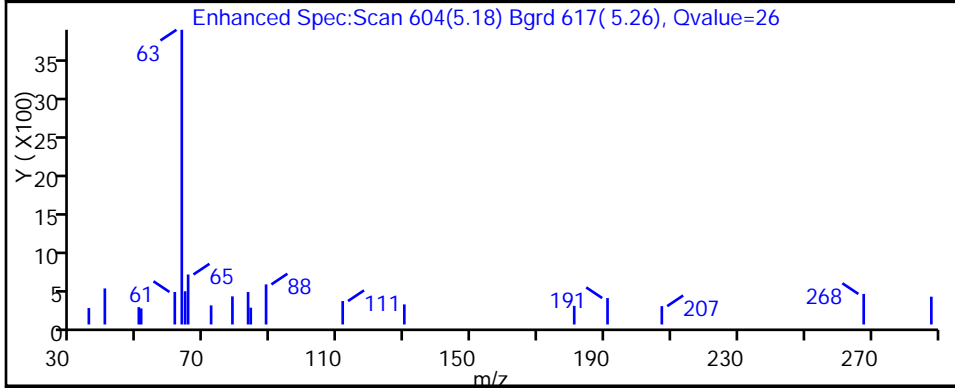
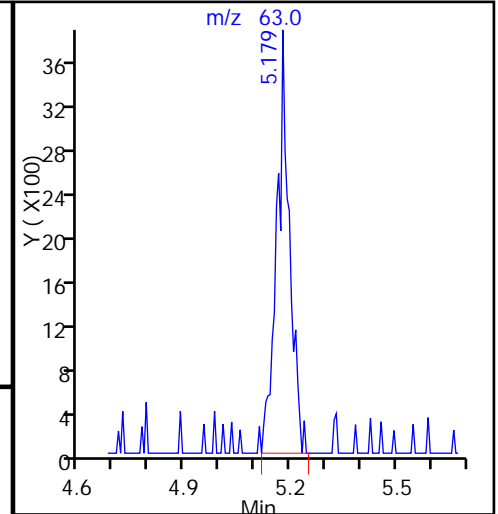
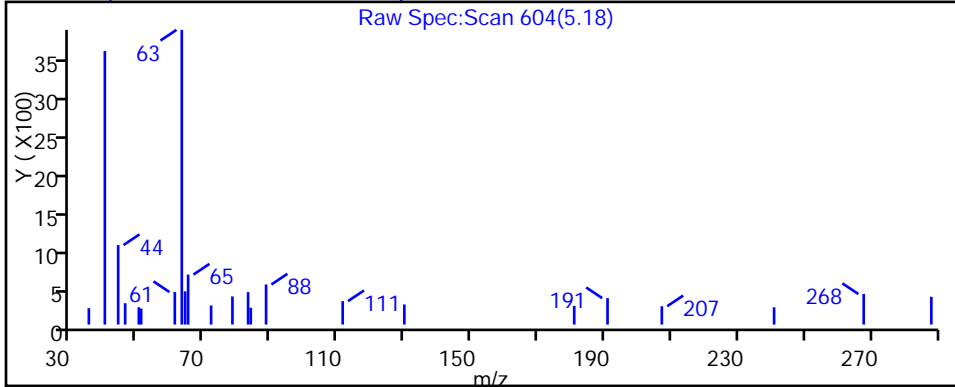
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 25.0000

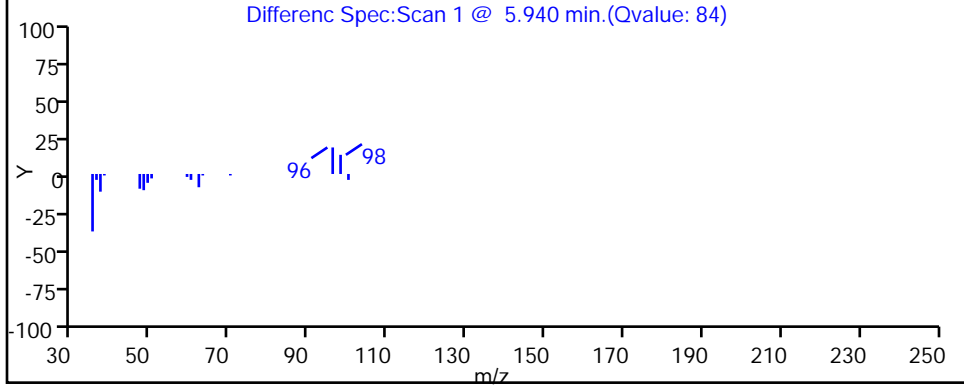
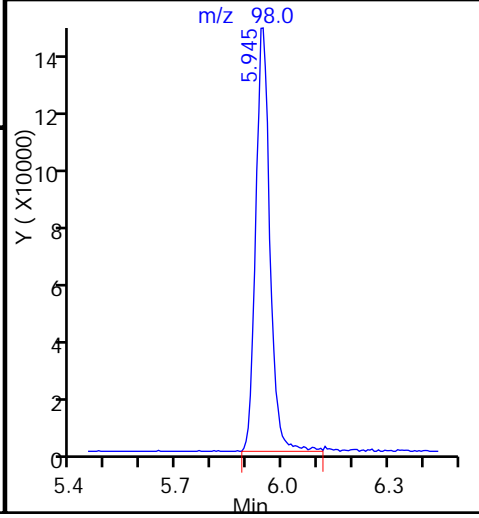
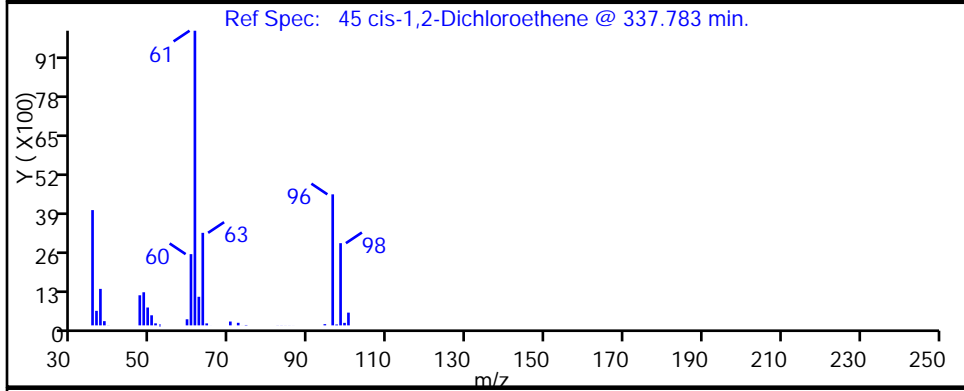
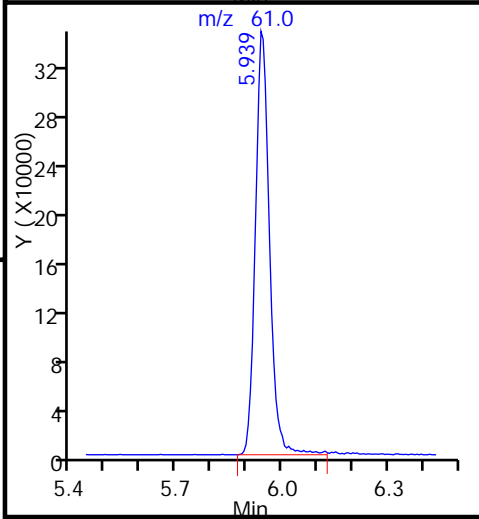
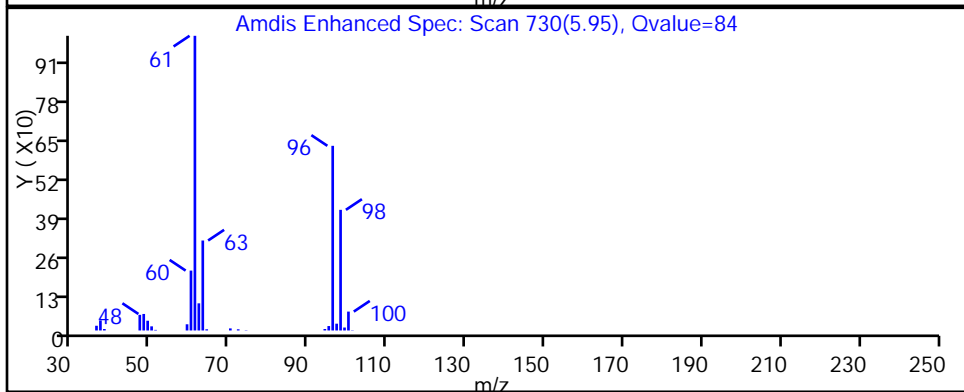
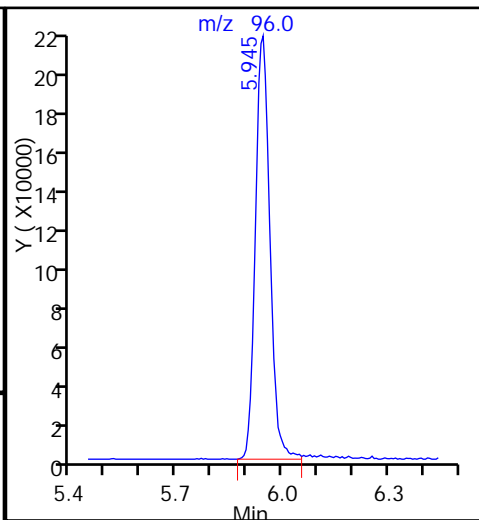
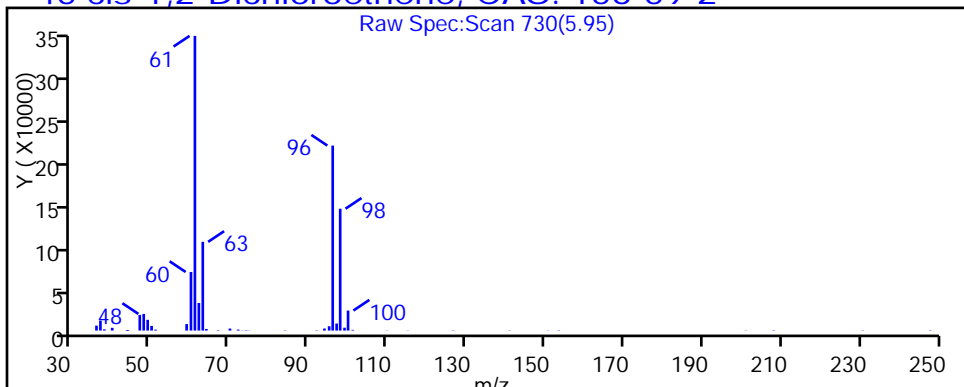
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 25.0000

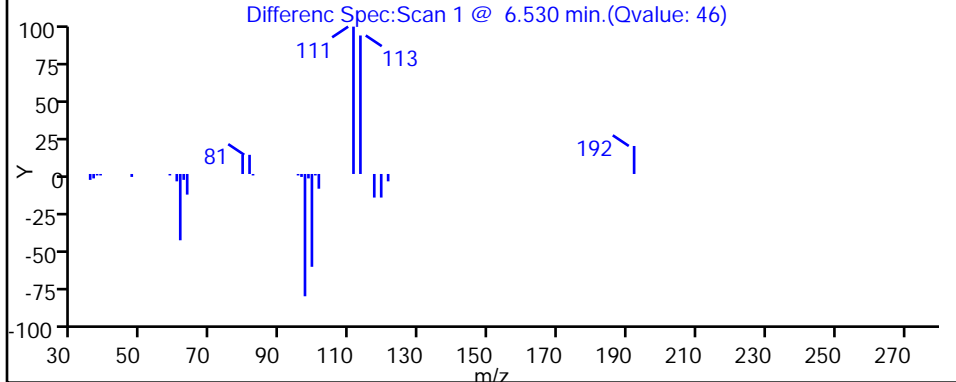
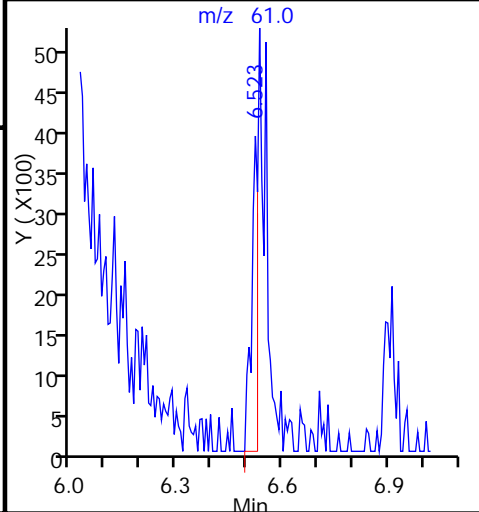
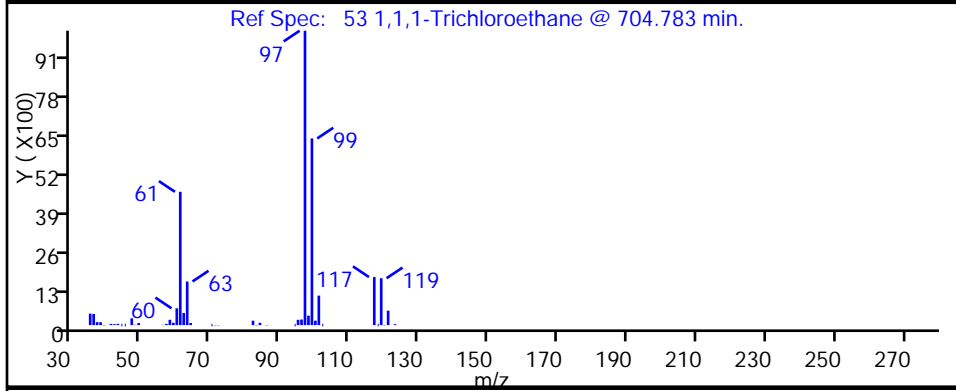
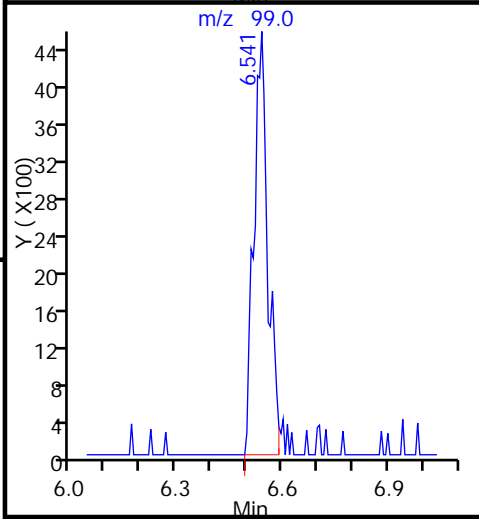
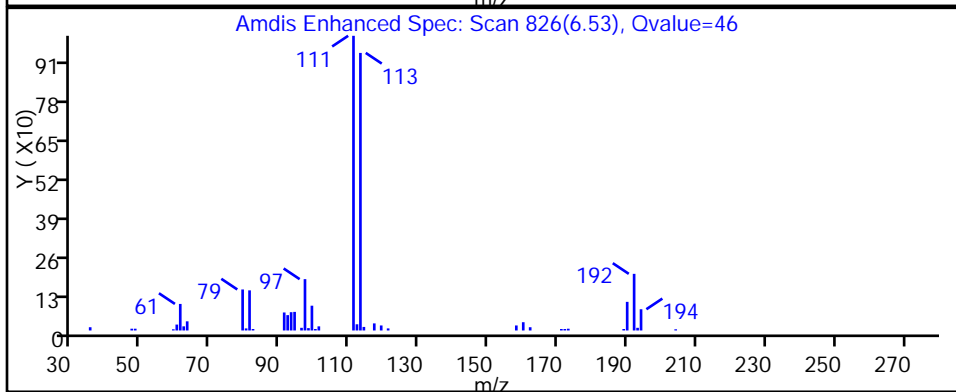
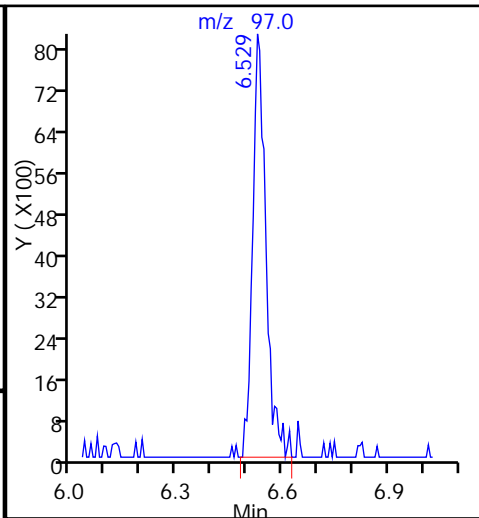
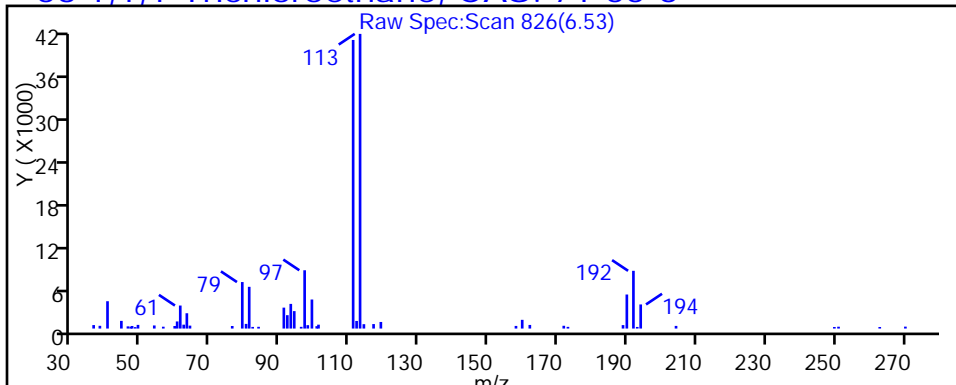
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 25.0000

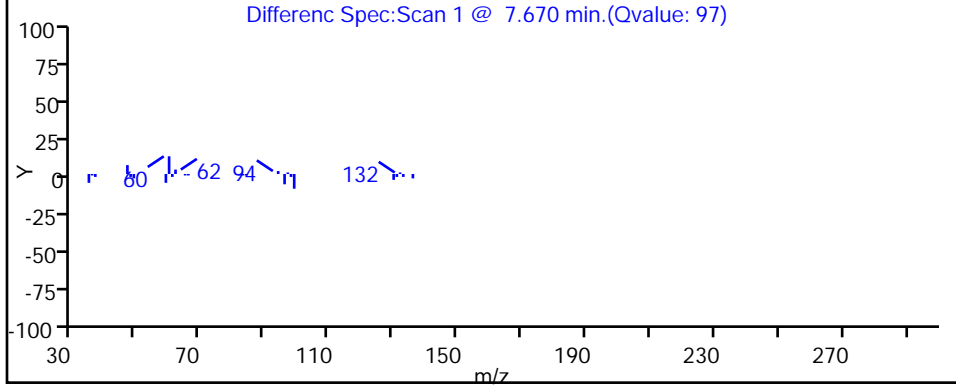
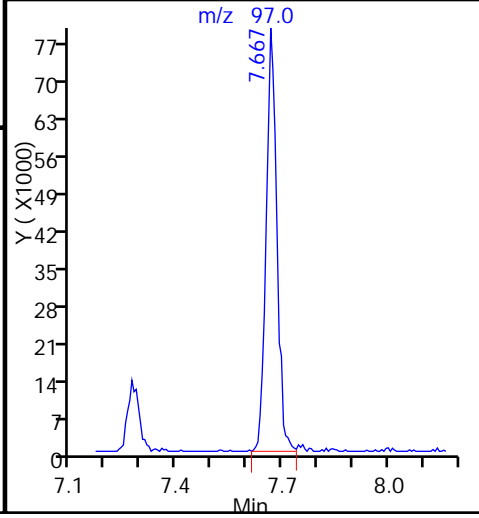
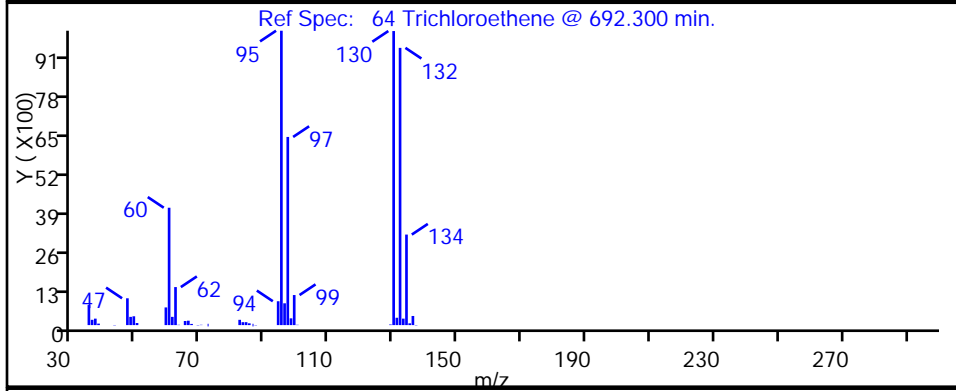
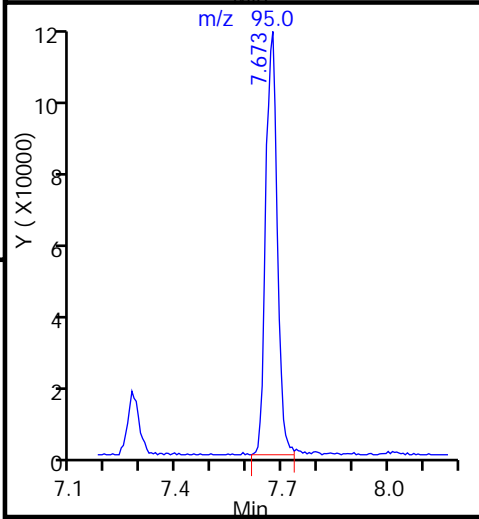
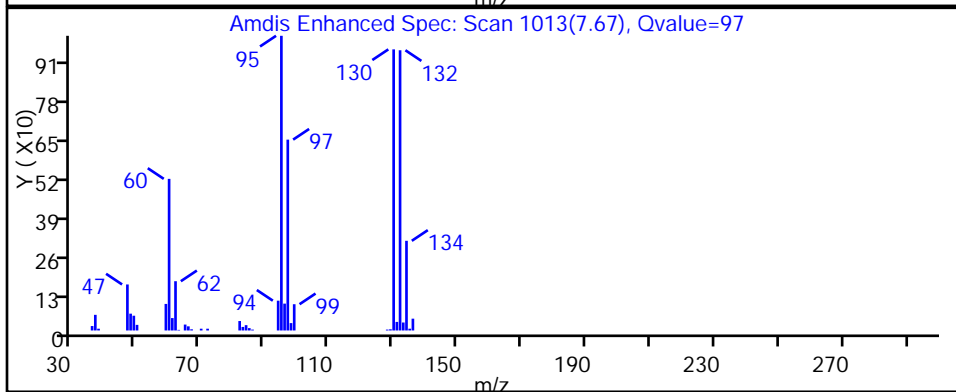
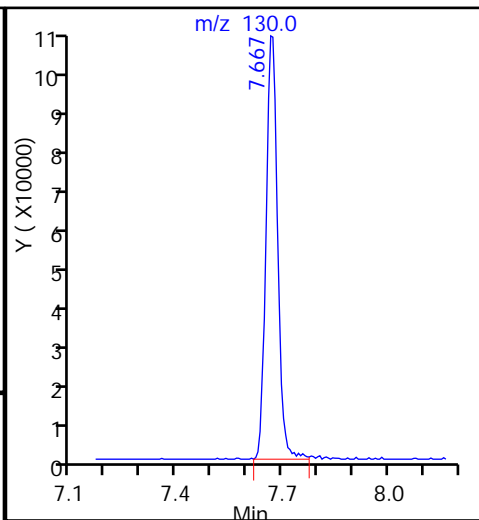
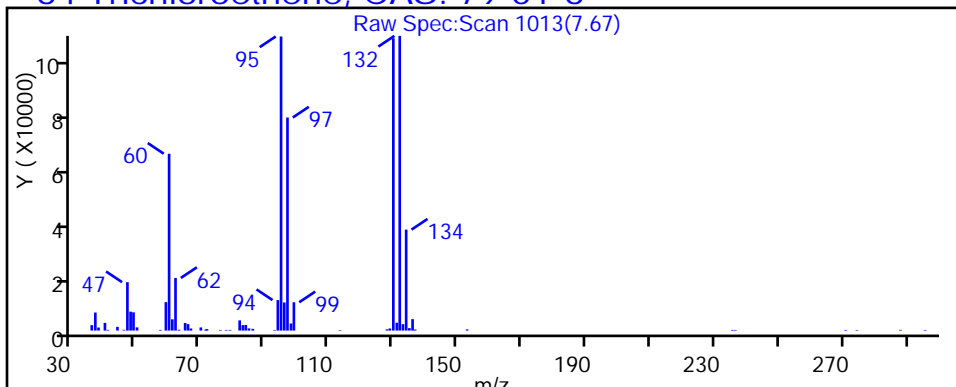
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128014.D

Injection Date: 28-Jan-2015 14:24:30

Instrument ID: CHHP5

Lims ID: 180-40617-C-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 13

Worklist Smp#: 14

Purge Vol: 5.000 mL

Dil. Factor: 25.0000

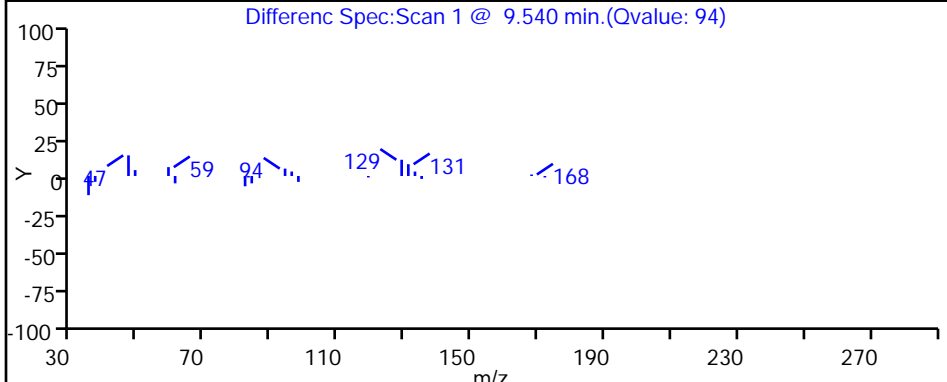
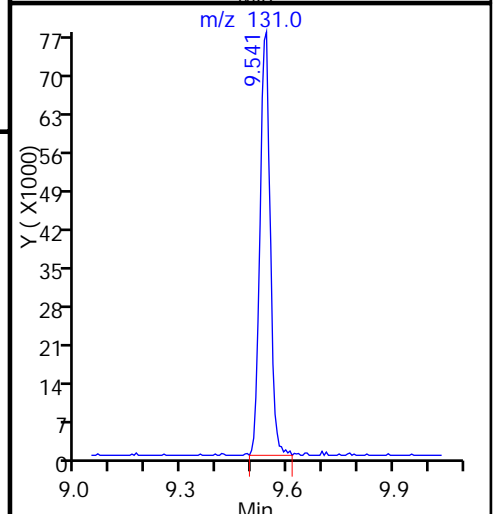
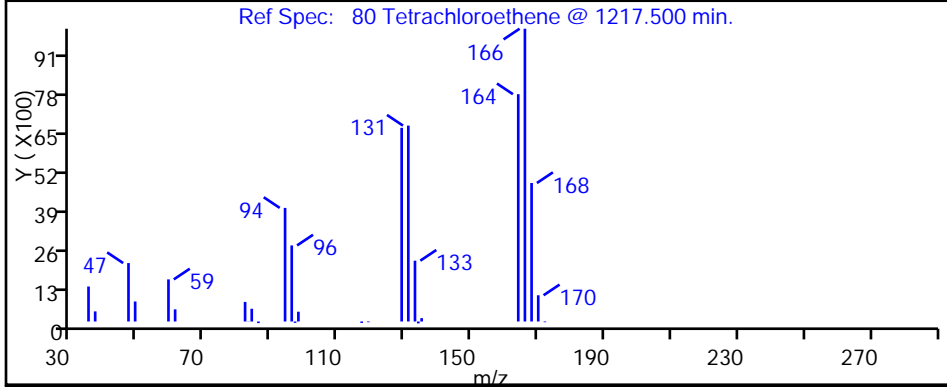
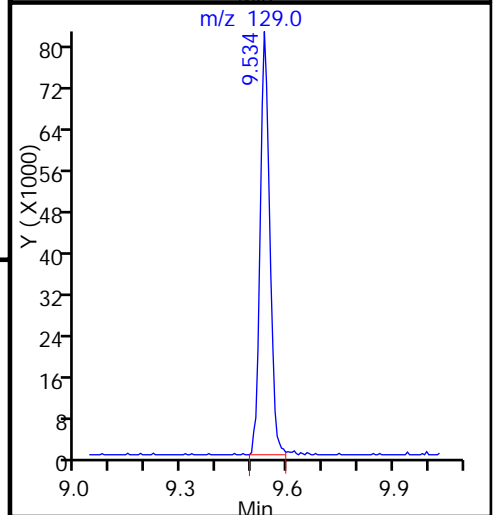
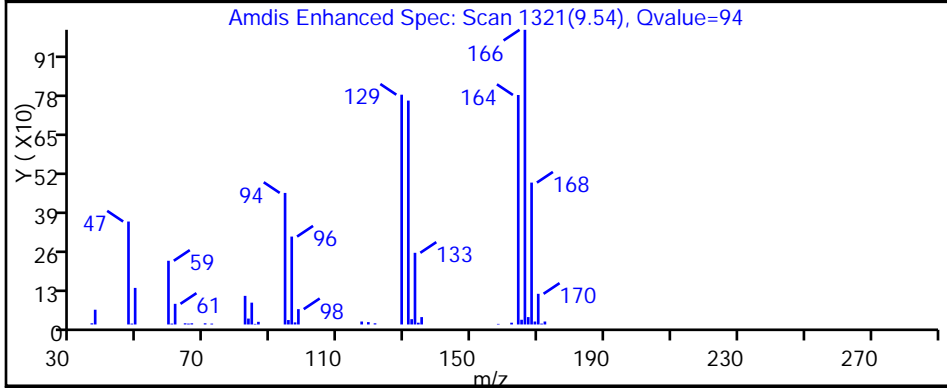
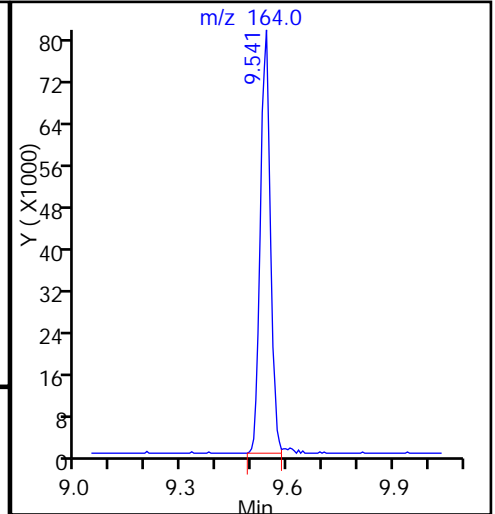
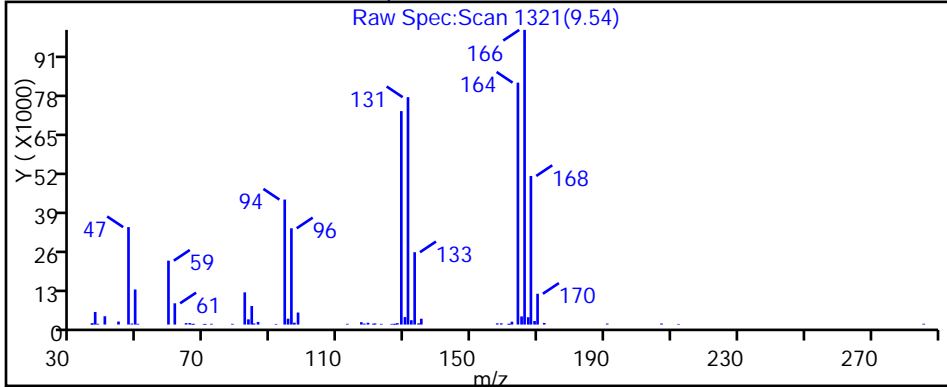
Method: MSVOA\_LL\_CHHP5

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-13-0/1-0 DL Lab Sample ID: 180-40617-2 DL  
 Matrix: Water Lab File ID: 50130015.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:37  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 15:45  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 50  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 132193 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	50	U	50	14
75-01-4	Vinyl chloride	22	J	50	11
74-83-9	Bromomethane	50	U	50	16
75-00-3	Chloroethane	50	U	50	11
75-35-4	1,1-Dichloroethene	50	U	50	15
67-64-1	Acetone	250	U	250	130
75-15-0	Carbon disulfide	50	U	50	11
75-09-2	Methylene Chloride	50	U	50	6.3
156-60-5	trans-1,2-Dichloroethene	50	U	50	8.5
1634-04-4	Methyl tert-butyl ether	50	U	50	9.2
75-34-3	1,1-Dichloroethane	50	U	50	5.8
156-59-2	cis-1,2-Dichloroethene	1200		50	12
74-97-5	Bromochloromethane	50	U	50	9.0
78-93-3	2-Butanone (MEK)	250	U	250	27
67-66-3	Chloroform	50	U	50	8.5
71-55-6	1,1,1-Trichloroethane	38	J	50	14
56-23-5	Carbon tetrachloride	50	U	50	6.8
71-43-2	Benzene	50	U	50	5.3
107-06-2	1,2-Dichloroethane	50	U	50	11
79-01-6	Trichloroethene	500		50	7.2
78-87-5	1,2-Dichloropropane	50	U	50	4.7
75-27-4	Bromodichloromethane	50	U	50	6.5
10061-01-5	cis-1,3-Dichloropropene	50	U	50	9.3
108-10-1	4-Methyl-2-pentanone (MIBK)	250	U	250	26
108-88-3	Toluene	50	U	50	7.5
10061-02-6	trans-1,3-Dichloropropene	50	U	50	7.4
79-00-5	1,1,2-Trichloroethane	50	U	50	10
127-18-4	Tetrachloroethene	360		50	7.4
591-78-6	2-Hexanone	250	U	250	8.0
124-48-1	Dibromochloromethane	50	U	50	6.8
106-93-4	1,2-Dibromoethane (EDB)	50	U	50	9.0
108-90-7	Chlorobenzene	50	U	50	6.8
630-20-6	1,1,1,2-Tetrachloroethane	50	U	50	14
100-41-4	Ethylbenzene	50	U	50	11
1330-20-7	Xylenes, Total	150	U	150	24
100-42-5	Styrene	50	U	50	4.8

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-13-0/1-0 DL Lab Sample ID: 180-40617-2 DL  
 Matrix: Water Lab File ID: 50130015.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:37  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 15:45  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 50  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 132193 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	50	U	50	9.6
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	10
107-13-1	Acrylonitrile	1000	U	1000	27
123-91-1	1,4-Dioxane	10000	U	10000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		64-135
2037-26-5	Toluene-d8 (Surr)	95		71-118
460-00-4	4-Bromofluorobenzene (Surr)	92		70-118
1868-53-7	Dibromofluoromethane (Surr)	119		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130015.D  
 Lims ID: 180-40617-E-2 Lab Sample ID: 180-40617-2  
 Client ID: HD-CW-13-0/1-0  
 Sample Type: Client  
 Inject. Date: 30-Jan-2015 15:45:30 ALS Bottle#: 15 Worklist Smp#: 15  
 Purge Vol: 5.000 mL Dil. Factor: 50.0000  
 Sample Info: 180-40617-E-2, 50x  
 Misc. Info.: 180-0005479-015  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 02-Feb-2015 08:55:12 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: fergusond

Date: 02-Feb-2015 08:55:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.280	4.308	-0.028	95	163794	1000.0	
* 2 Fluorobenzene (IS)	96	7.280	7.271	0.009	99	411956	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.368	-0.004	97	93872	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.685	-0.003	98	129118	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.531	6.523	0.008	93	104585	59.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	94	144564	50.2	
\$ 7 Toluene-d8 (Surr)	98	8.922	8.926	-0.004	95	369008	47.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.526	11.529	-0.003	85	137561	46.2	
12 Chloromethane	50		1.790				ND	
13 Vinyl chloride	62	1.908	1.911	-0.003	30	7419	2.22	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.422				ND	
22 1,1-Dichloroethene	96		3.384				ND	
24 Acetone	43		3.505				ND	
26 Carbon disulfide	76		3.676				ND	
31 Methylene Chloride	84		4.144				ND	
33 Acrylonitrile	53		4.552				ND	
34 trans-1,2-Dichloroethene	96	4.579	4.564	0.015	19	775	0.3411	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63		5.172				ND	
45 cis-1,2-Dichloroethene	96	5.947	5.945	0.002	84	299978	122.1	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.231				ND	
52 Chloroform	83		6.346				ND	
53 1,1,1-Trichloroethane	97	6.531	6.529	0.002	44	9758	3.76	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130	7.675	7.666	0.009	96	108898	49.9	
67 1,2-Dichloropropane	63		7.904				ND	
70 1,4-Dioxane	88		8.056				ND	



Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.993				ND	
77 trans-1,3-Dichloropropene	75		9.218				ND	
79 1,1,2-Trichloroethane	97		9.394				ND	
80 Tetrachloroethene	164	9.537	9.534	0.003	94	67070	36.5	
82 2-Hexanone	43		9.656				ND	
84 Chlorodibromomethane	129		9.796				ND	
85 Ethylene Dibromide	107		9.899				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.025				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130015.D

Injection Date: 30-Jan-2015 15:45:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-E-2

Lab Sample ID: 180-40617-2

Worklist Smp#: 15

Client ID: HD-CW-13-0/1-0

Purge Vol: 5.000 mL

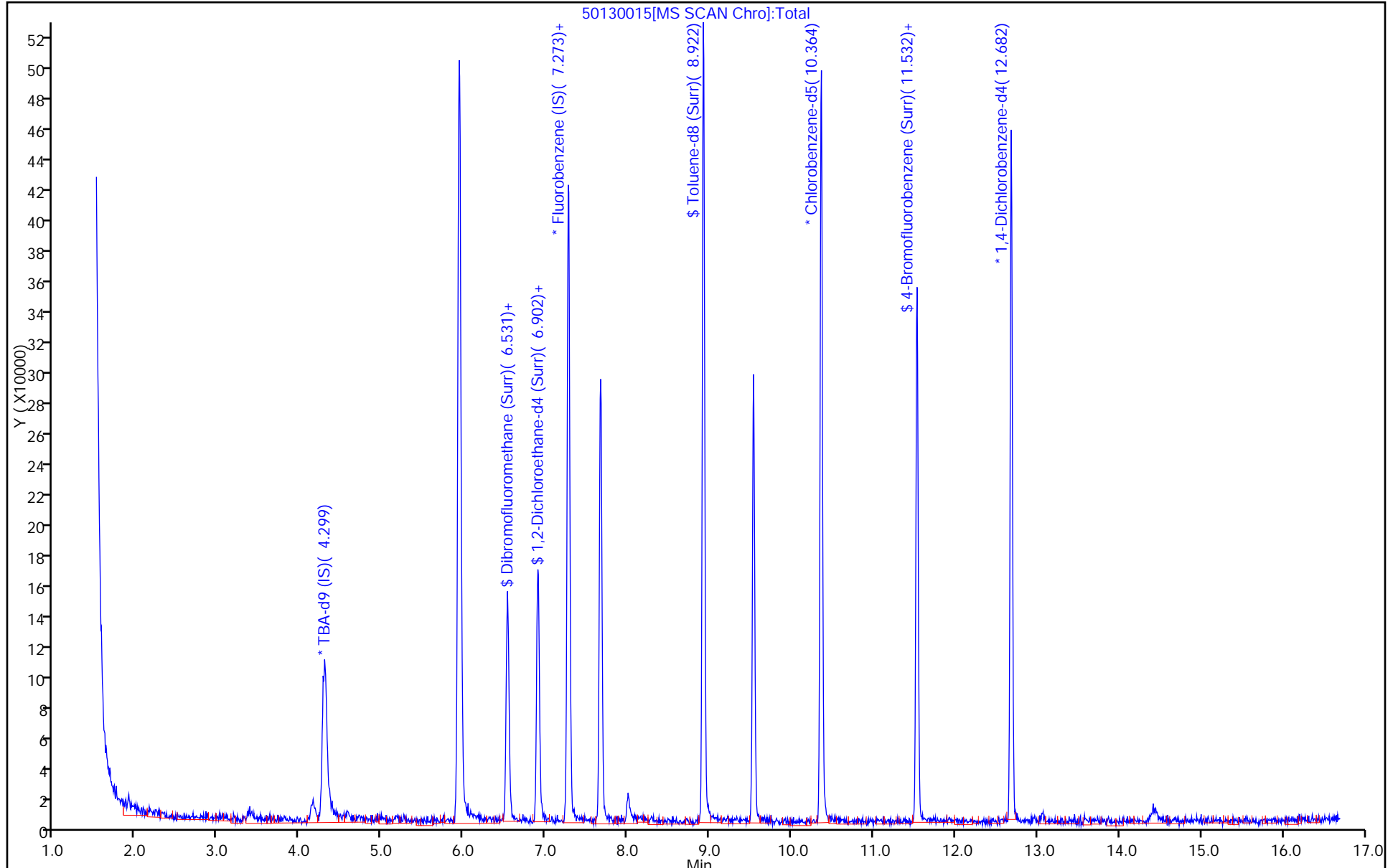
Dil. Factor: 50.0000

ALS Bottle#: 15

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130015.D

Injection Date: 30-Jan-2015 15:45:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 15 Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

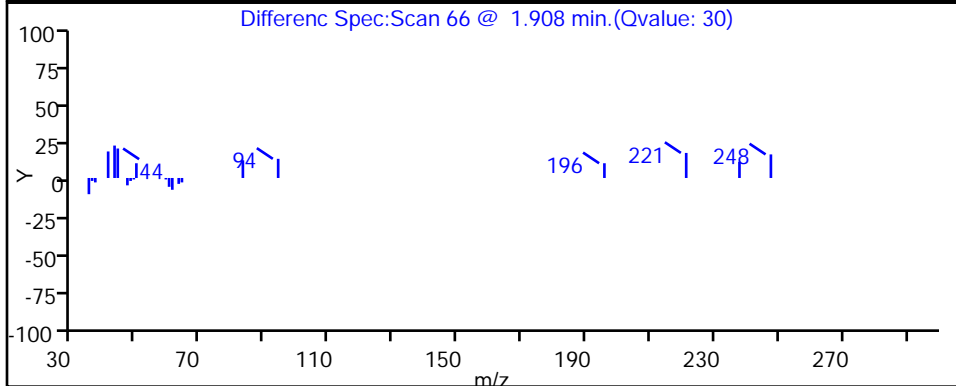
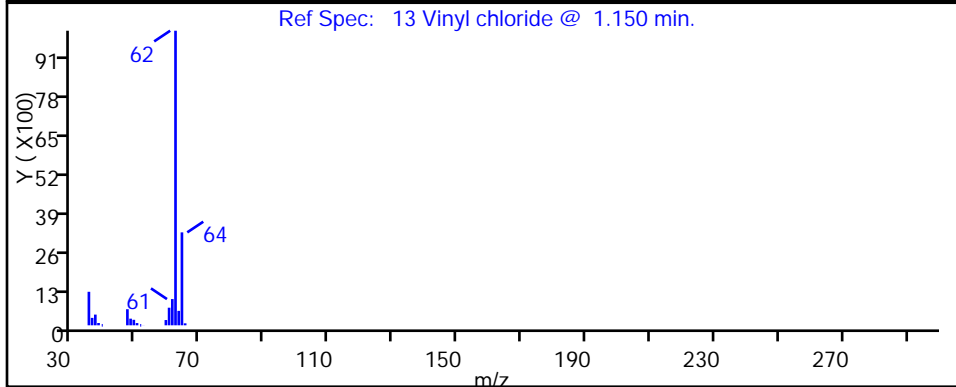
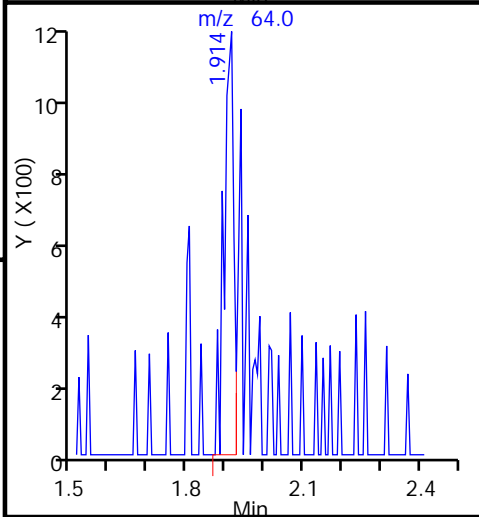
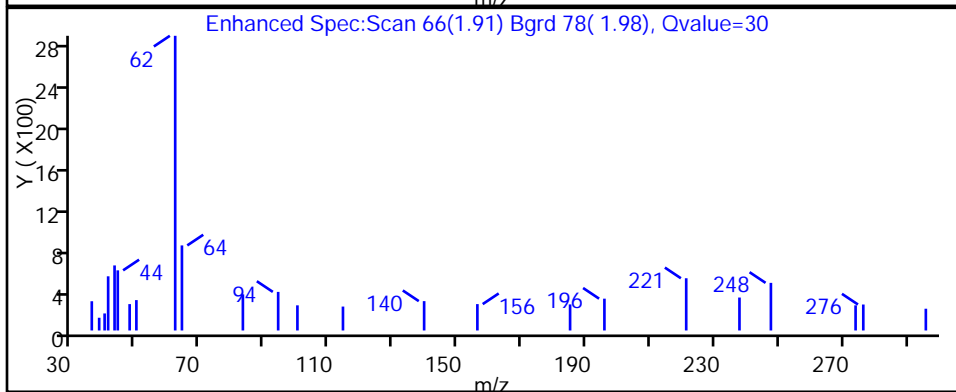
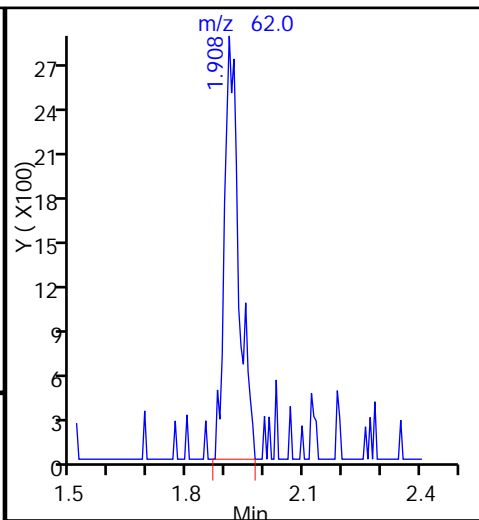
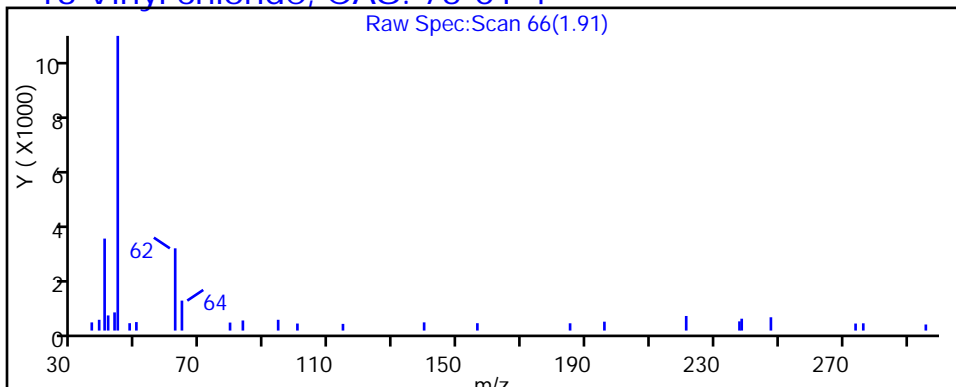
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130015.D

Injection Date: 30-Jan-2015 15:45:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

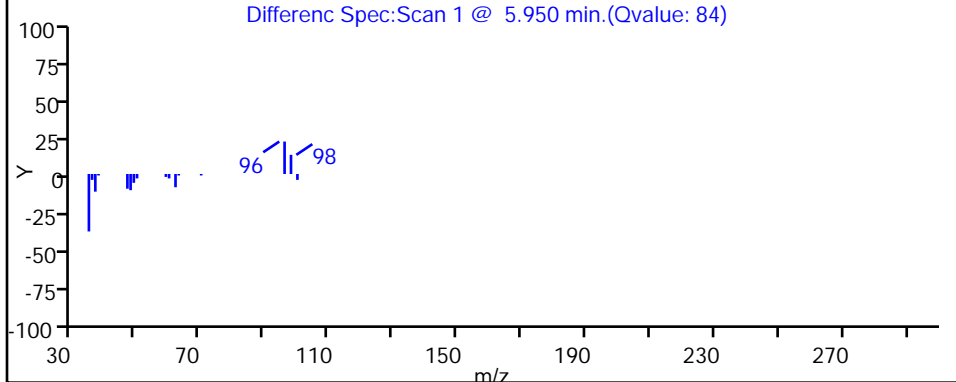
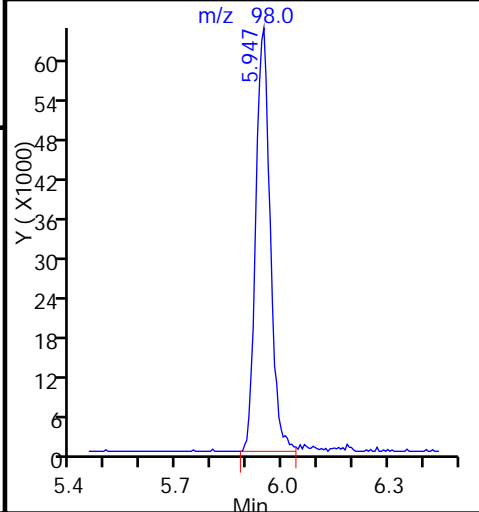
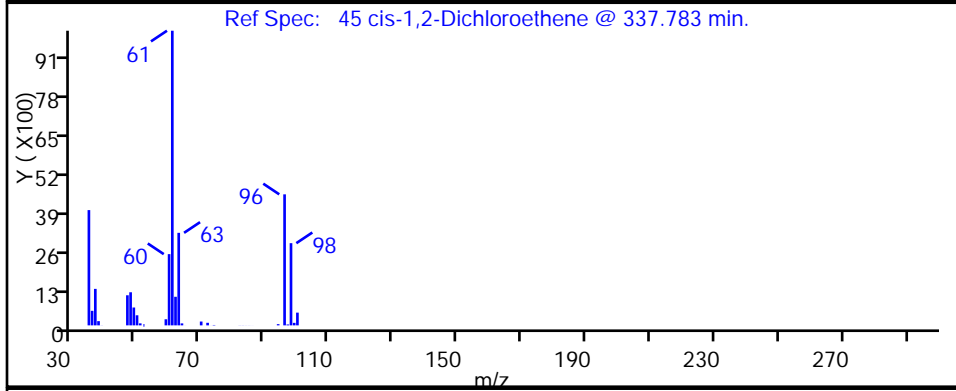
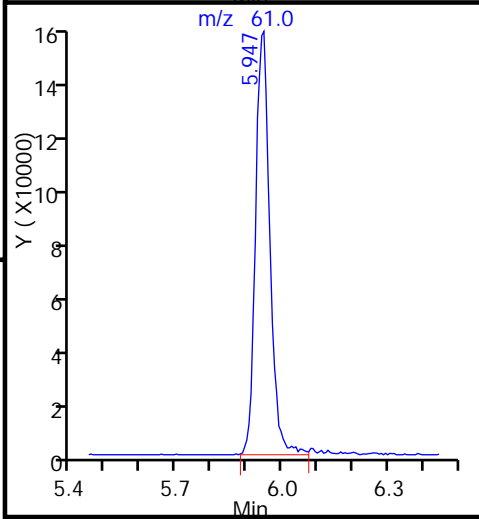
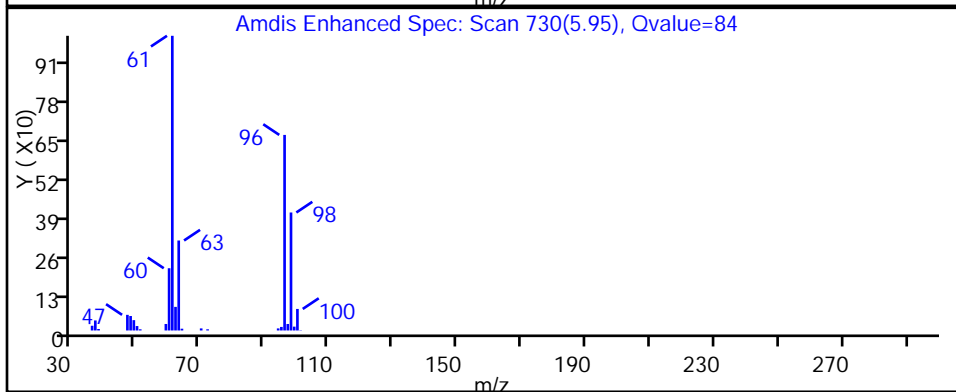
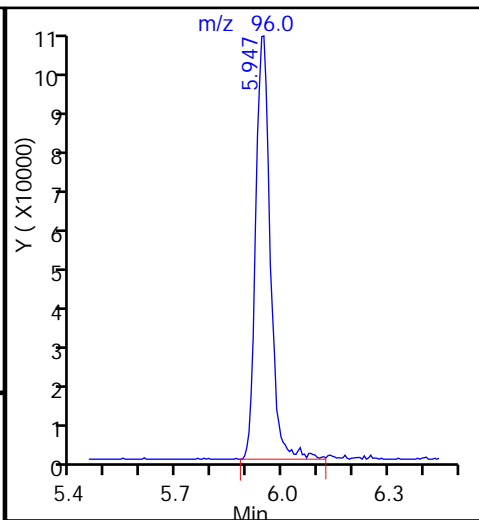
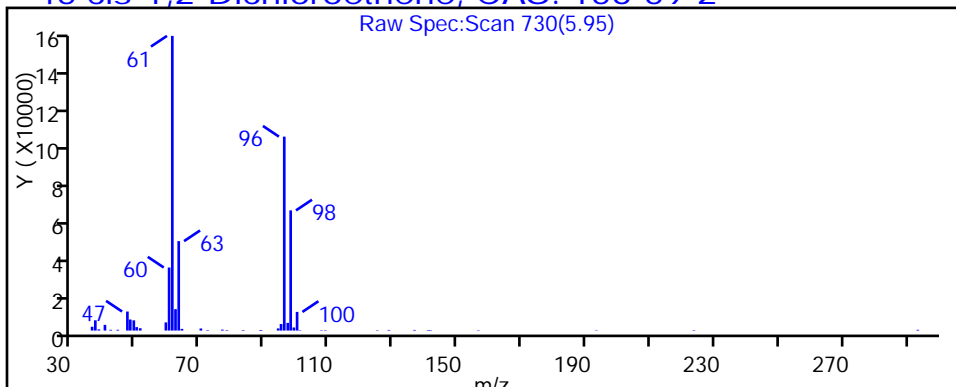
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130015.D

Injection Date: 30-Jan-2015 15:45:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

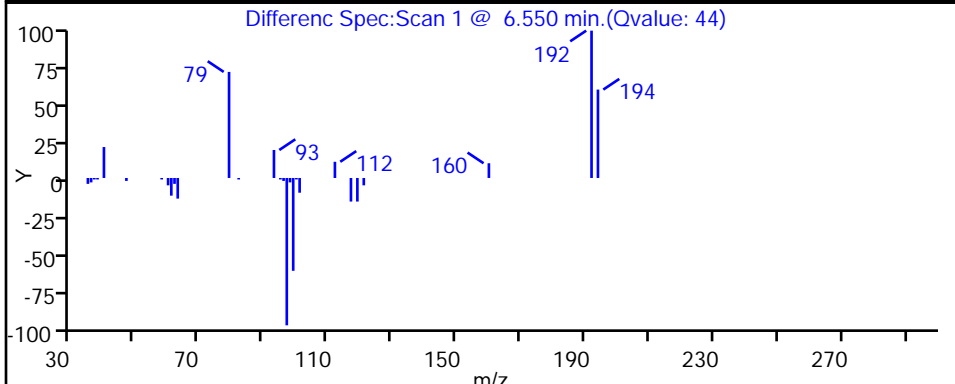
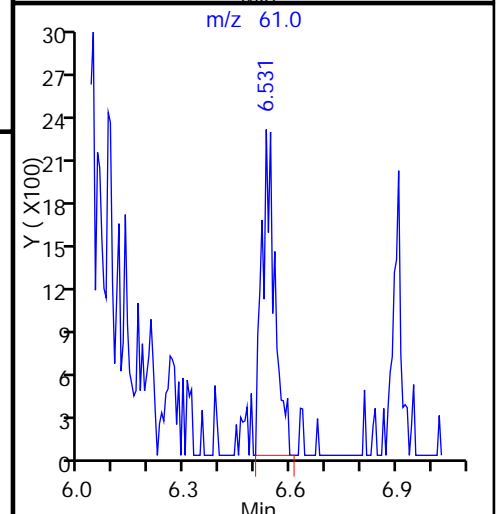
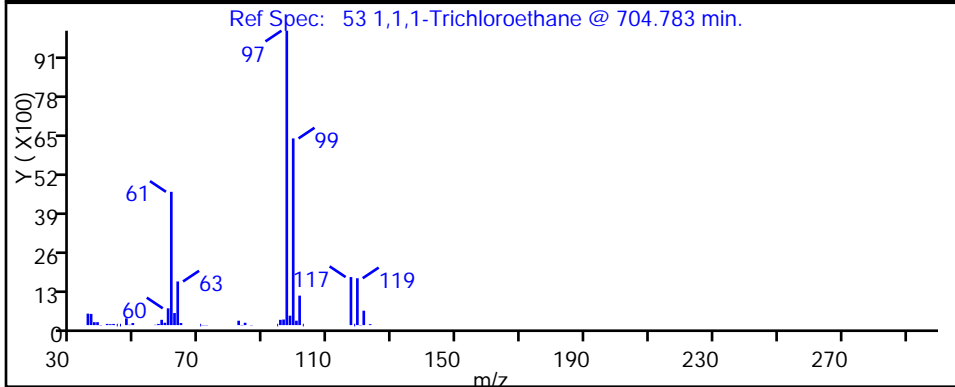
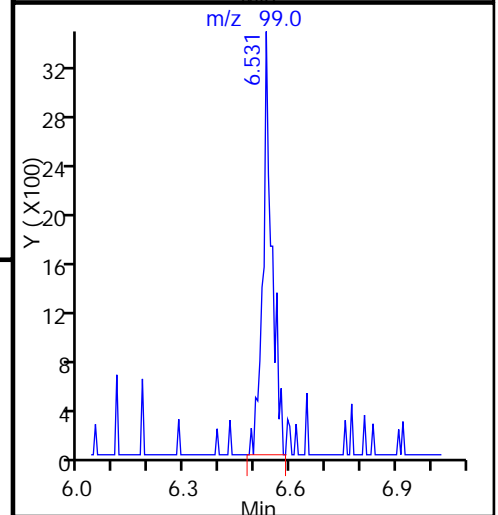
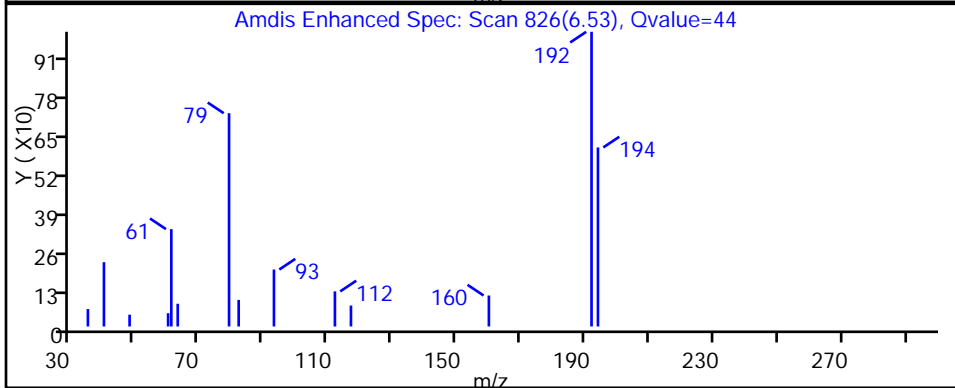
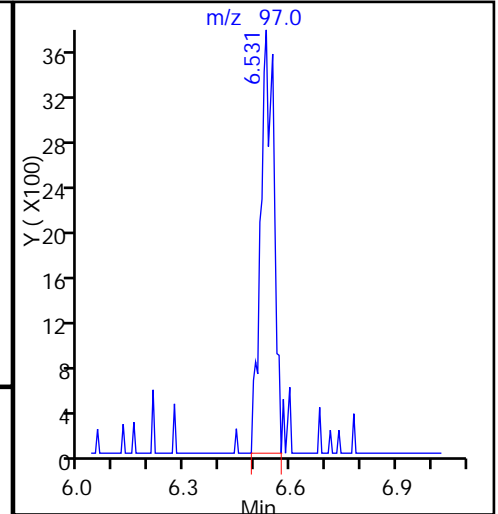
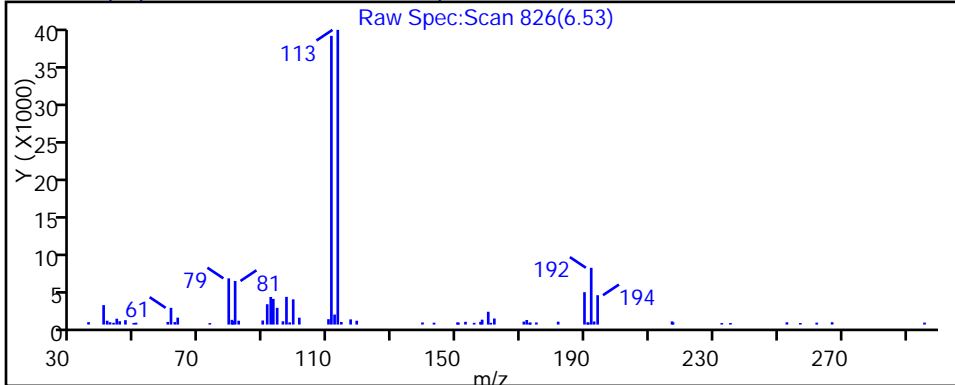
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130015.D

Injection Date: 30-Jan-2015 15:45:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

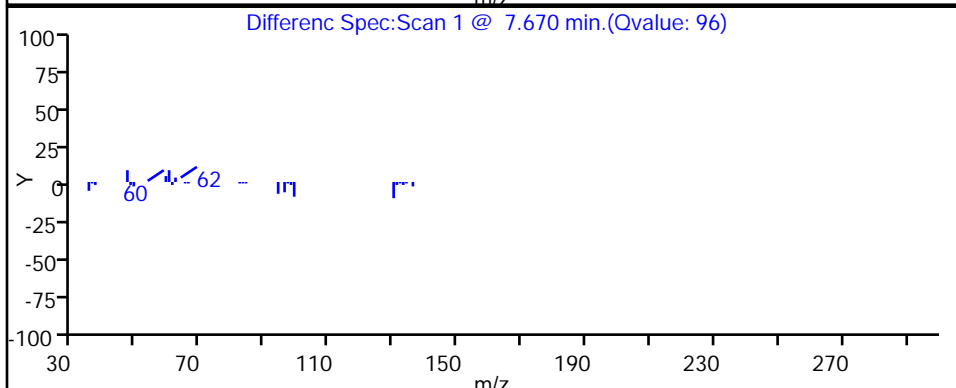
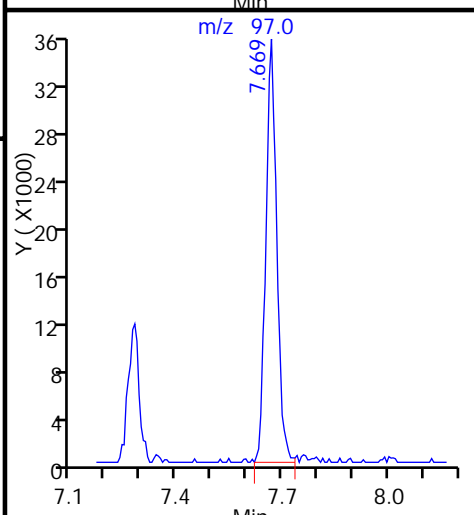
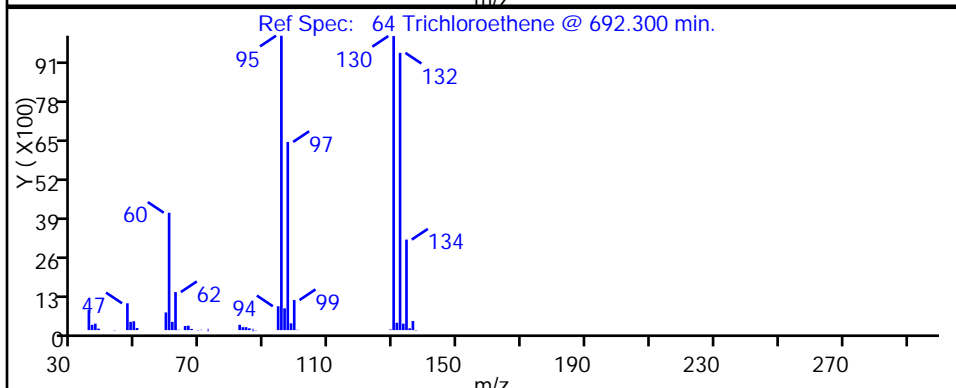
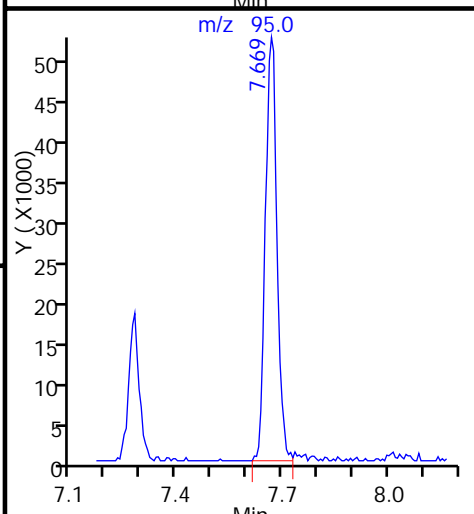
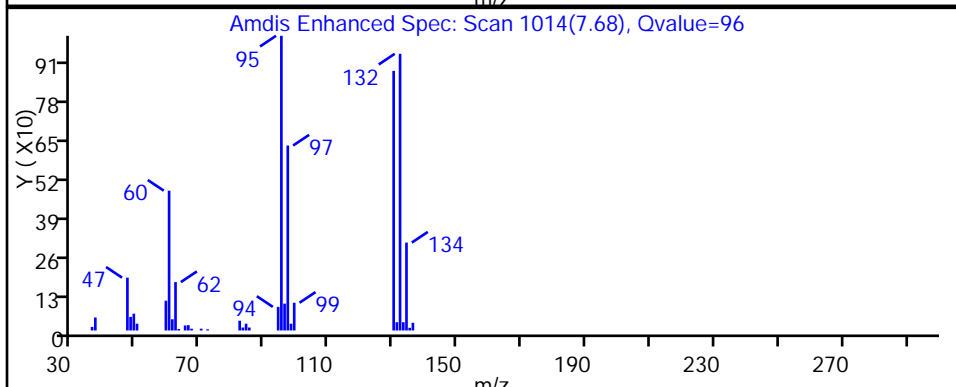
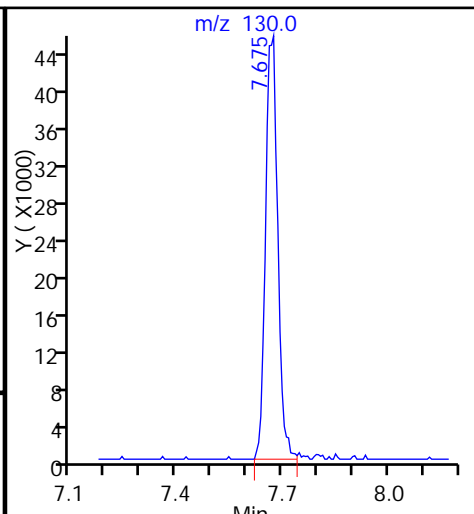
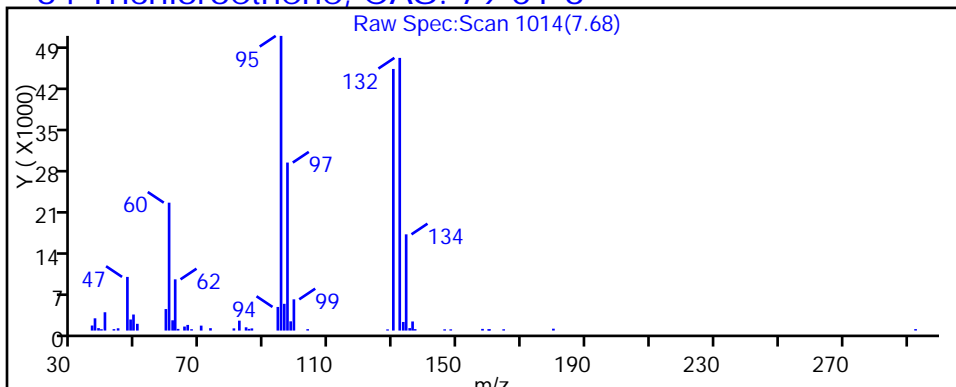
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130015.D

Injection Date: 30-Jan-2015 15:45:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-2

Lab Sample ID: 180-40617-2

Client ID: HD-CW-13-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 15

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

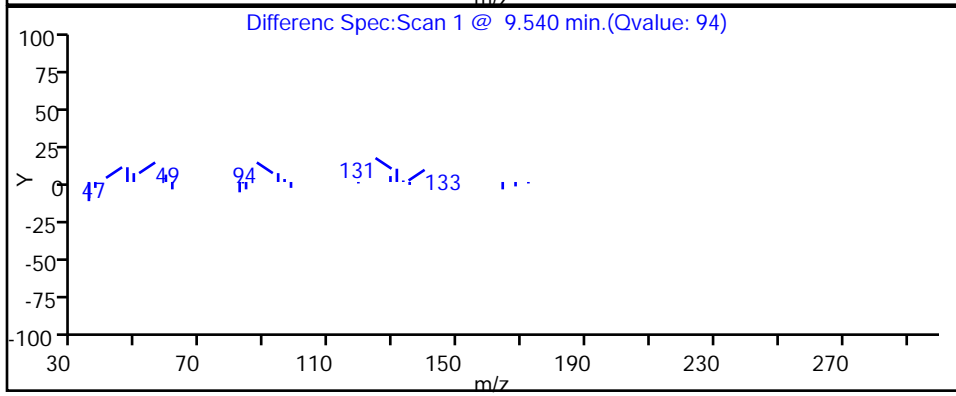
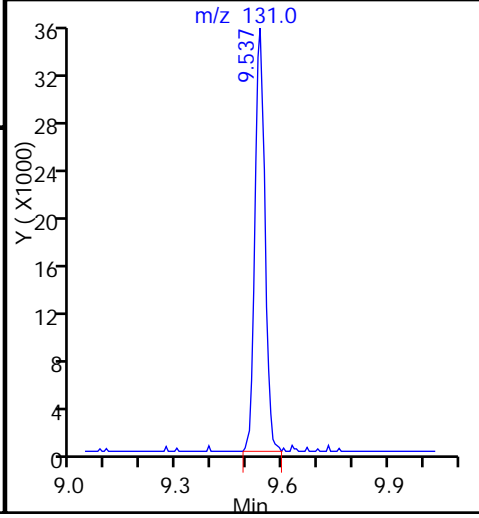
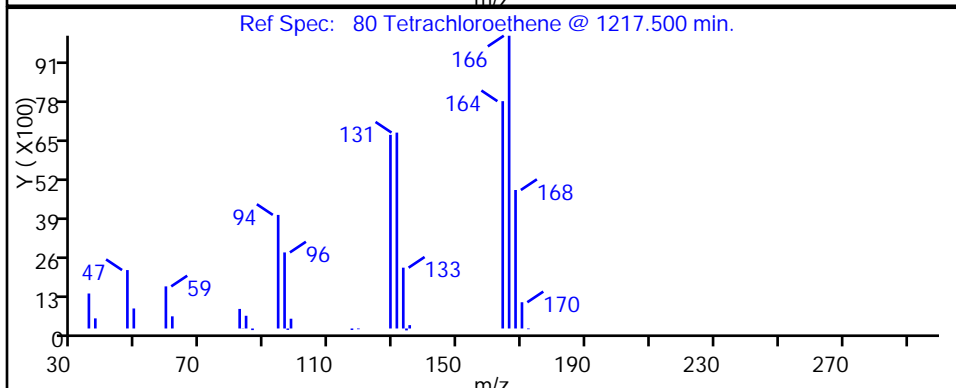
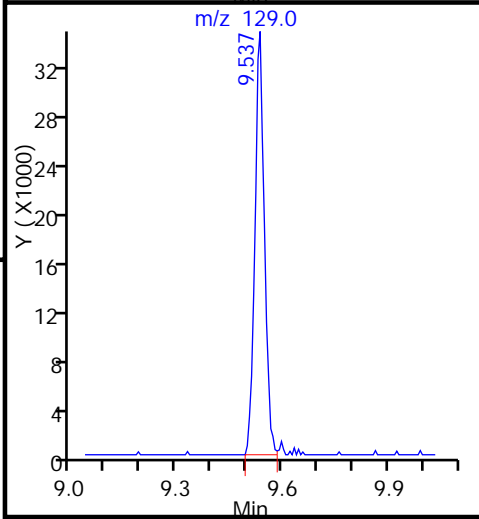
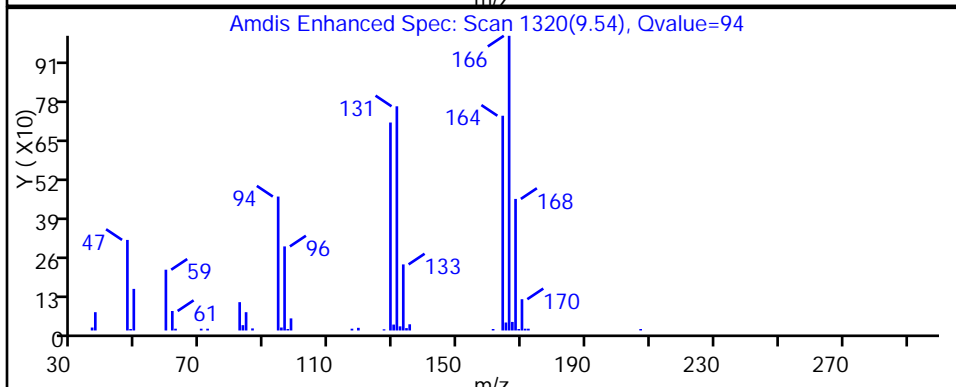
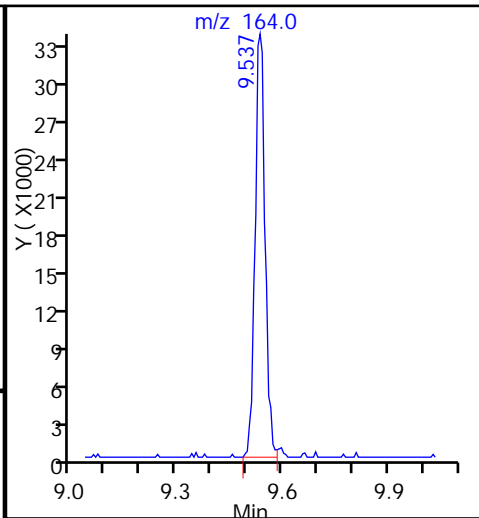
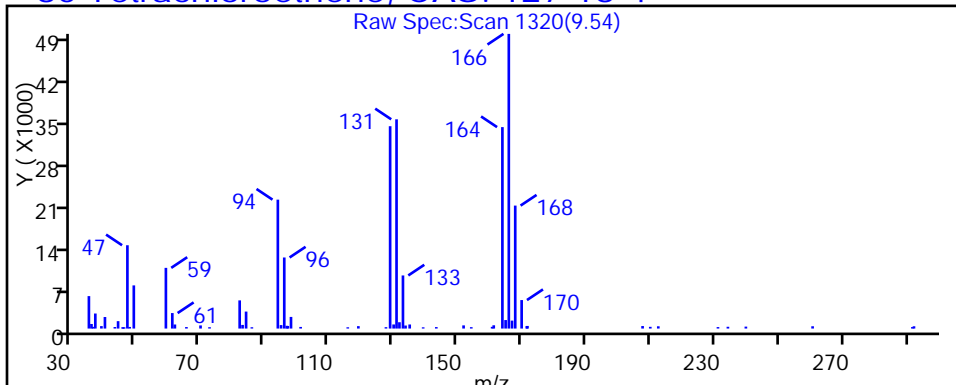
Method: MSVOA\_LL\_CHHP5

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-15A-0/1-0 Lab Sample ID: 180-40617-3  
 Matrix: Water Lab File ID: 50128016.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 08:10  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 15:13  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 500  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	500	U	500	140
75-01-4	Vinyl chloride	500	U	500	110
74-83-9	Bromomethane	500	U	500	160
75-00-3	Chloroethane	500	U	500	110
75-35-4	1,1-Dichloroethene	2300		500	150
67-64-1	Acetone	2500	U	2500	1300
75-15-0	Carbon disulfide	500	U	500	110
75-09-2	Methylene Chloride	500	U	500	63
156-60-5	trans-1,2-Dichloroethene	500	U	500	85
1634-04-4	Methyl tert-butyl ether	500	U	500	92
75-34-3	1,1-Dichloroethane	130	J	500	58
156-59-2	cis-1,2-Dichloroethene	11000		500	120
74-97-5	Bromochloromethane	500	U	500	90
78-93-3	2-Butanone (MEK)	2500	U	2500	270
67-66-3	Chloroform	500	U	500	85
71-55-6	1,1,1-Trichloroethane	13000		500	140
56-23-5	Carbon tetrachloride	500	U	500	68
71-43-2	Benzene	500	U	500	53
107-06-2	1,2-Dichloroethane	500	U	500	110
79-01-6	Trichloroethene	2600		500	72
78-87-5	1,2-Dichloropropane	500	U	500	47
75-27-4	Bromodichloromethane	500	U	500	65
10061-01-5	cis-1,3-Dichloropropene	500	U	500	93
108-10-1	4-Methyl-2-pentanone (MIBK)	2500	U	2500	260
108-88-3	Toluene	500	U	500	75
10061-02-6	trans-1,3-Dichloropropene	500	U	500	74
79-00-5	1,1,2-Trichloroethane	500	U	500	100
127-18-4	Tetrachloroethene	2700		500	74
591-78-6	2-Hexanone	2500	U	2500	80
124-48-1	Dibromochloromethane	500	U	500	68
106-93-4	1,2-Dibromoethane (EDB)	500	U	500	90
108-90-7	Chlorobenzene	500	U	500	68
630-20-6	1,1,1,2-Tetrachloroethane	500	U	500	140
100-41-4	Ethylbenzene	500	U	500	110
1330-20-7	Xylenes, Total	1500	U	1500	240
100-42-5	Styrene	500	U	500	48



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-15A-0/1-0 Lab Sample ID: 180-40617-3  
 Matrix: Water Lab File ID: 50128016.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 08:10  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 15:13  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 500  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	500	U	500	96
79-34-5	1,1,2,2-Tetrachloroethane	500	U	500	100
107-13-1	Acrylonitrile	10000	U	10000	270
123-91-1	1,4-Dioxane	100000	U	100000	17000

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		64-135
2037-26-5	Toluene-d8 (Surr)	97		71-118
460-00-4	4-Bromofluorobenzene (Surr)	96		70-118
1868-53-7	Dibromofluoromethane (Surr)	110		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D  
 Lims ID: 180-40617-E-3 Lab Sample ID: 180-40617-3  
 Client ID: HD-CW-15A-0/1-0  
 Sample Type: Client  
 Inject. Date: 28-Jan-2015 15:13:30 ALS Bottle#: 15 Worklist Smp#: 16  
 Purge Vol: 5.000 mL Dil. Factor: 500.0000  
 Sample Info: 180-40617-E-3, 500x  
 Misc. Info.: 180-0005445-016  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 16:30:25 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 16:30:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.308	-0.006	94	166857	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.276	0.000	99	447816	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.367	-0.006	98	102767	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	142512	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.528	6.534	-0.006	54	105301	55.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.905	6.899	0.006	93	152928	48.9	
\$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	95	416464	48.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	82	156008	47.9	
12 Chloromethane	50		1.783				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.416				ND	
22 1,1-Dichloroethene	96	3.383	3.383	0.000	92	56223	23.0	
24 Acetone	43		3.499				ND	
26 Carbon disulfide	76		3.675				ND	
31 Methylene Chloride	84		4.156				ND	
33 Acrylonitrile	53		4.557				ND	
34 trans-1,2-Dichloroethene	96		4.563				ND	
35 Methyl tert-butyl ether	73		4.588				ND	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	6	7517	1.31	
45 cis-1,2-Dichloroethene	96	5.944	5.938	0.006	83	289731	108.5	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.224				ND	
52 Chloroform	83		6.352				ND	
53 1,1,1-Trichloroethane	97	6.534	6.534	0.000	95	355520	126.1	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.990				ND	
64 Trichloroethene	130	7.672	7.666	0.006	94	61432	25.9	
67 1,2-Dichloropropane	63		7.903				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.657				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.223				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.539	9.539	0.000	95	54830	27.3	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.904				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.476				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.622				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.218				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D

Injection Date: 28-Jan-2015 15:13:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-E-3

Lab Sample ID: 180-40617-3

Worklist Smp#: 16

Client ID: HD-CW-15A-0/1-0

Purge Vol: 5.000 mL

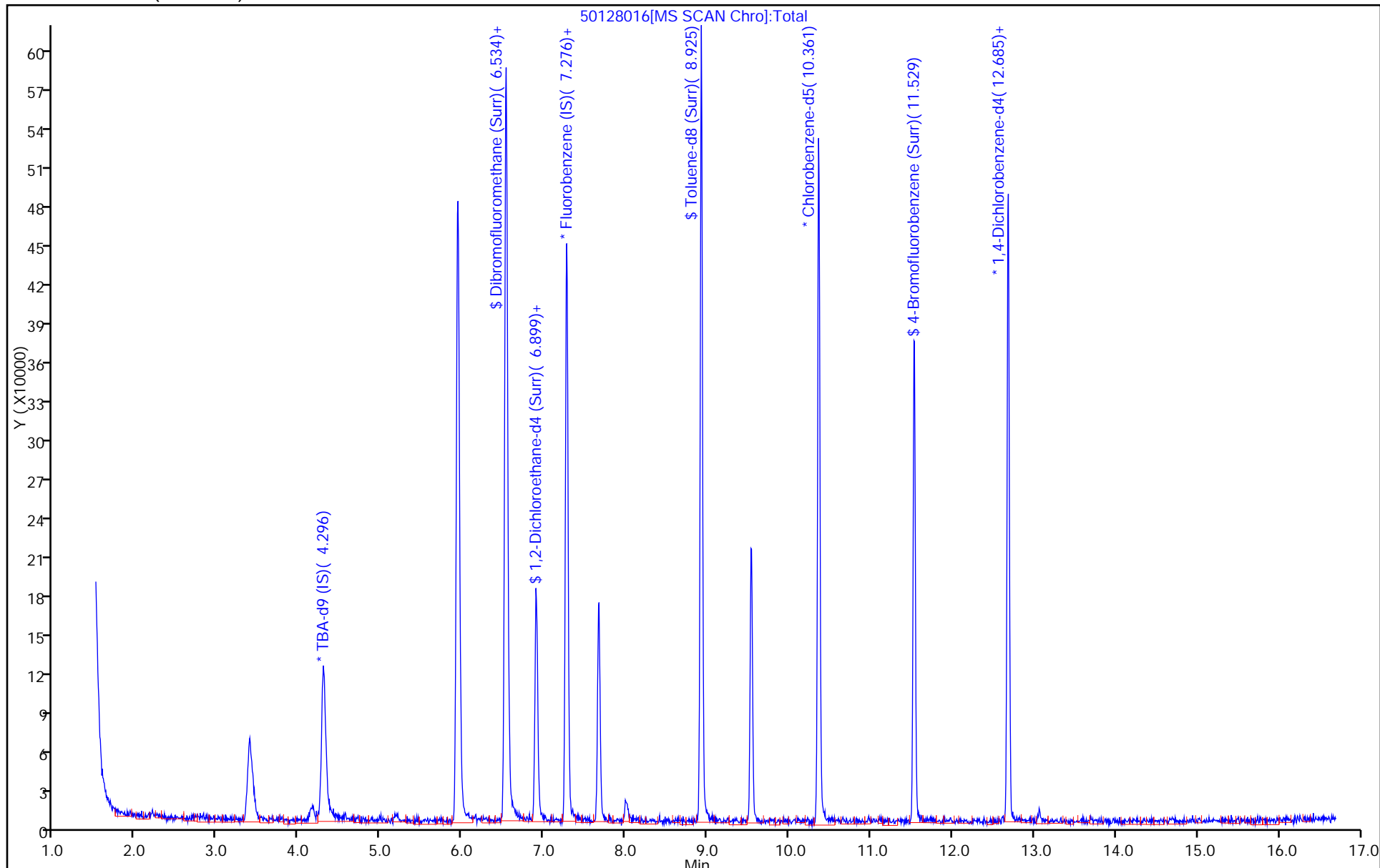
Dil. Factor: 500.0000

ALS Bottle#: 15

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D

Injection Date: 28-Jan-2015 15:13:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-3

Lab Sample ID: 180-40617-3

Client ID: HD-CW-15A-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 500.0000

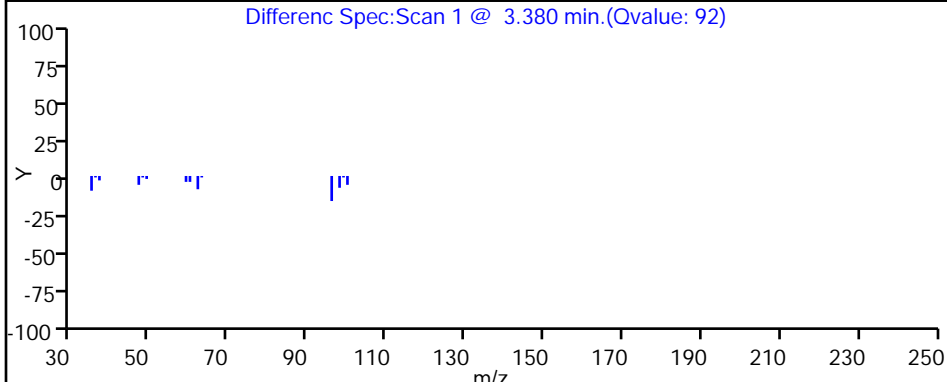
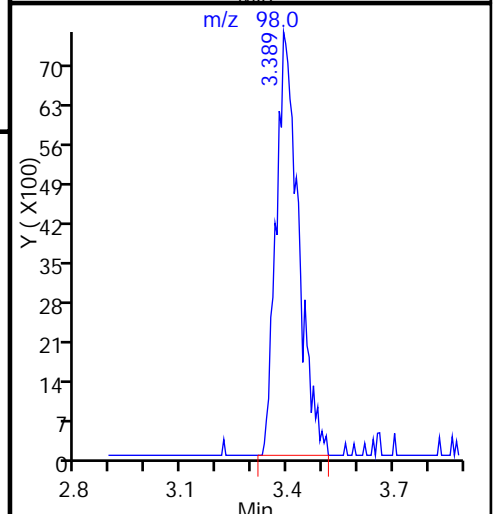
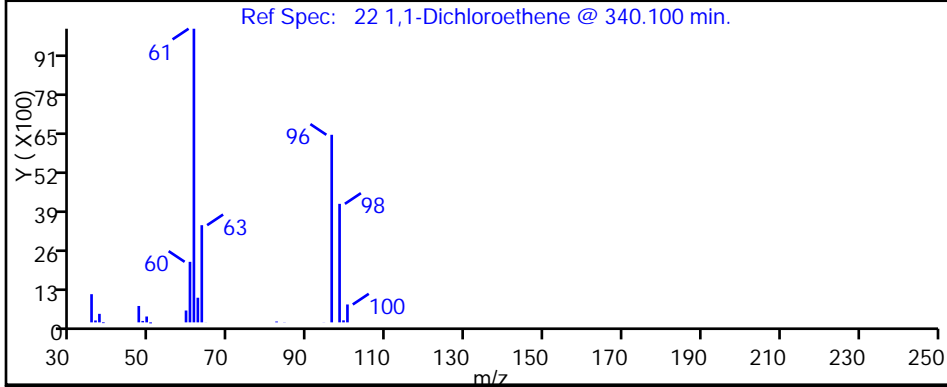
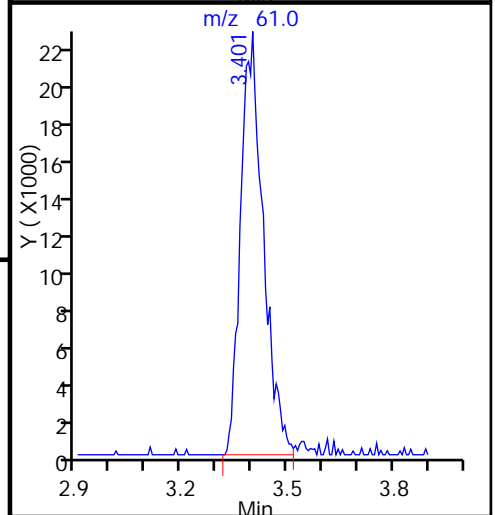
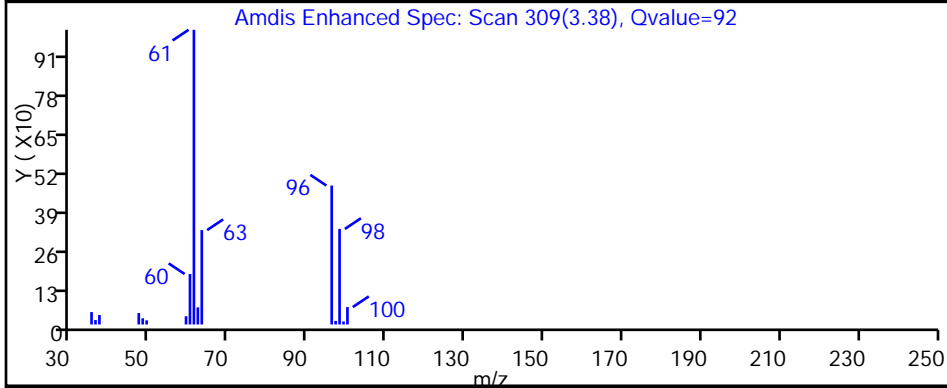
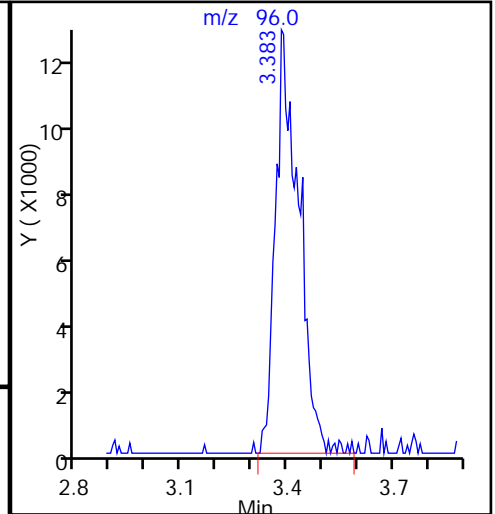
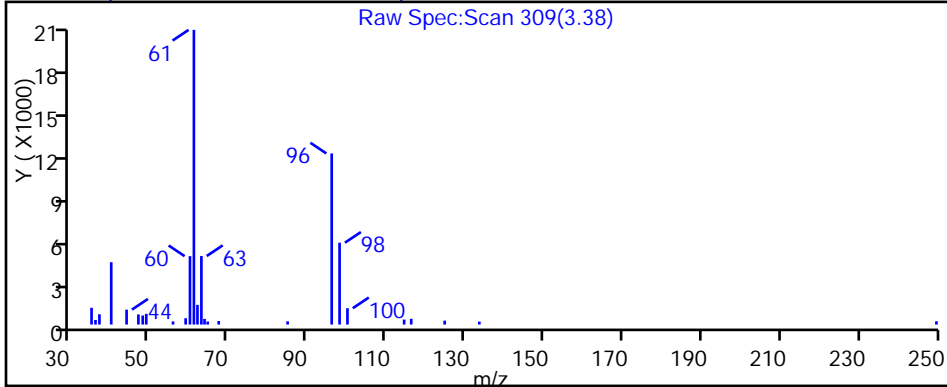
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D

Injection Date: 28-Jan-2015 15:13:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-3

Lab Sample ID: 180-40617-3

Client ID: HD-CW-15A-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 500.0000

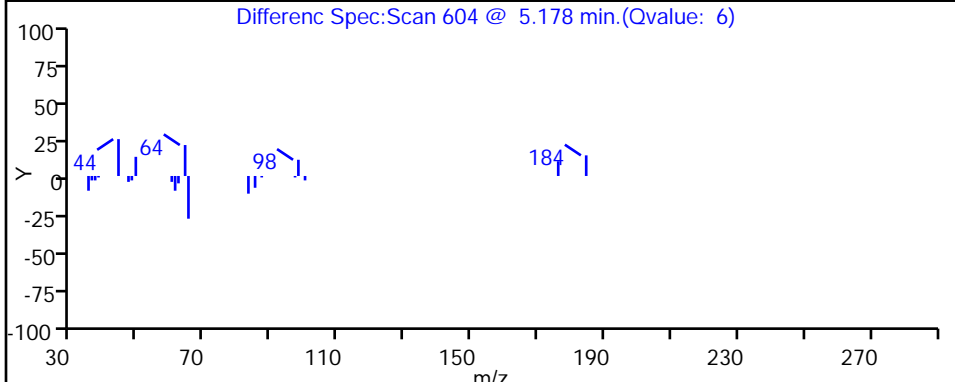
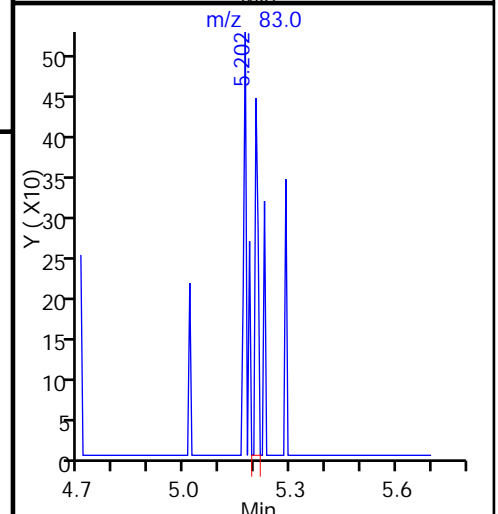
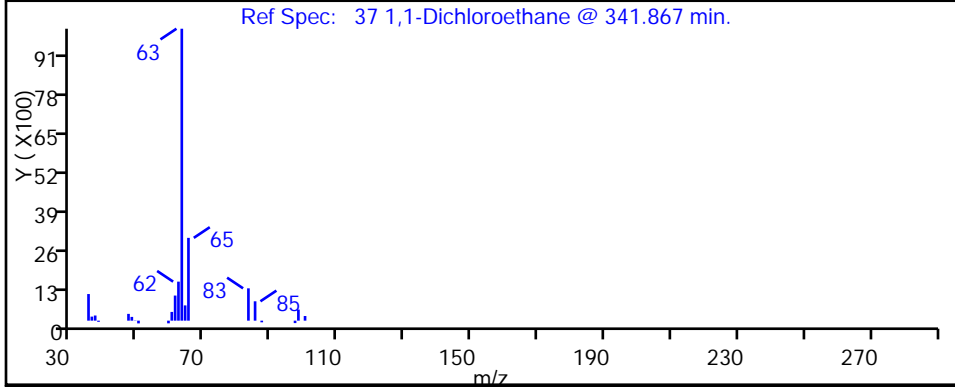
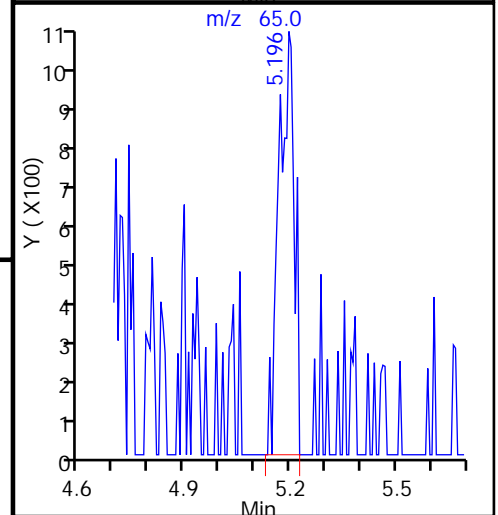
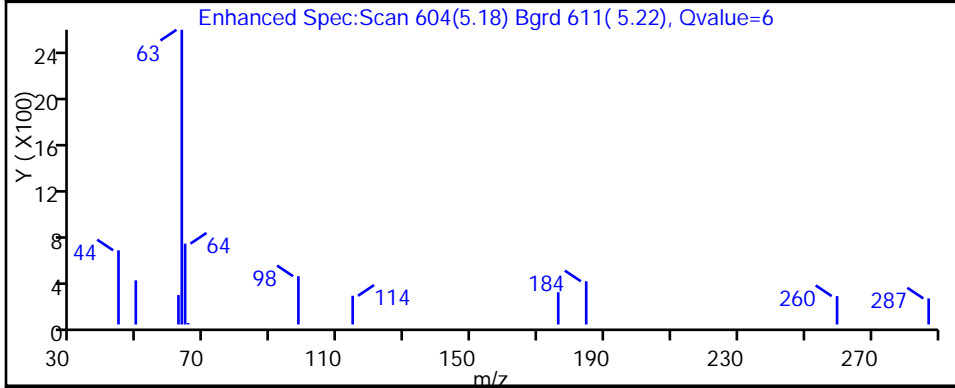
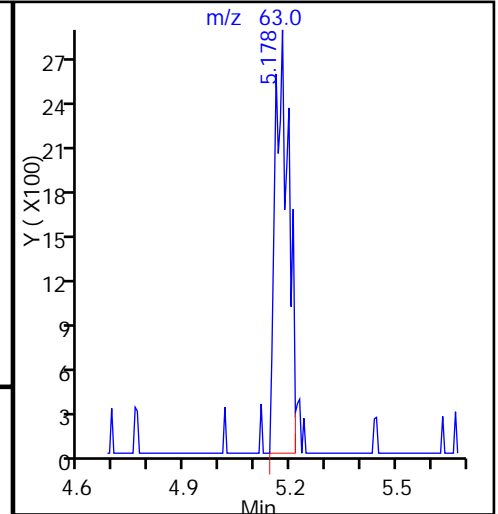
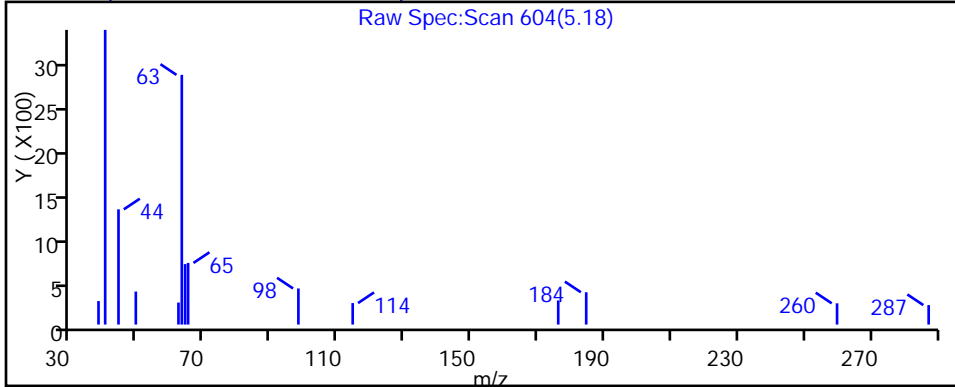
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D

Injection Date: 28-Jan-2015 15:13:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-3

Lab Sample ID: 180-40617-3

Client ID: HD-CW-15A-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 500.0000

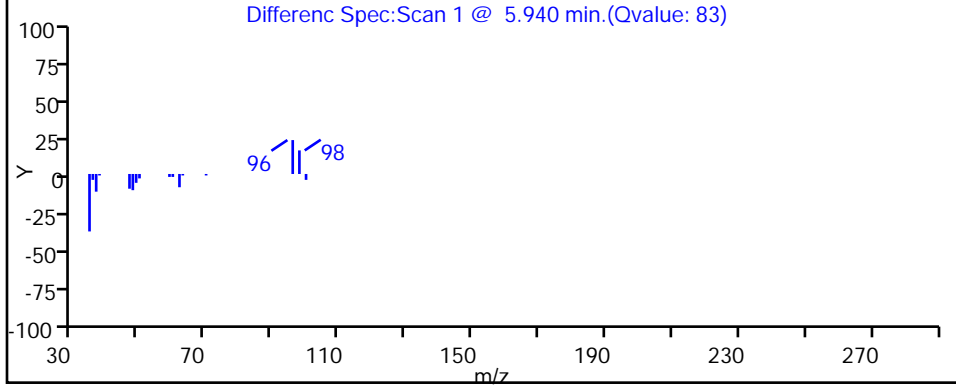
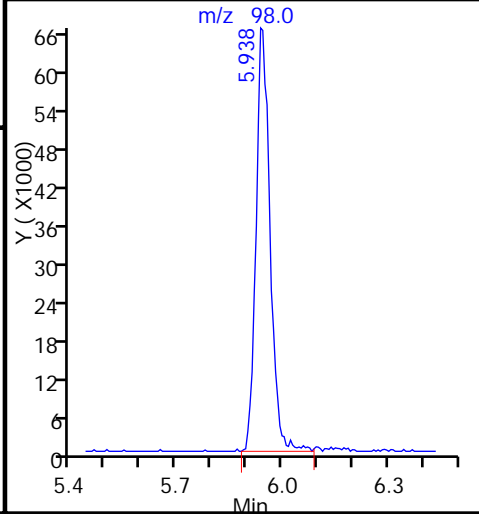
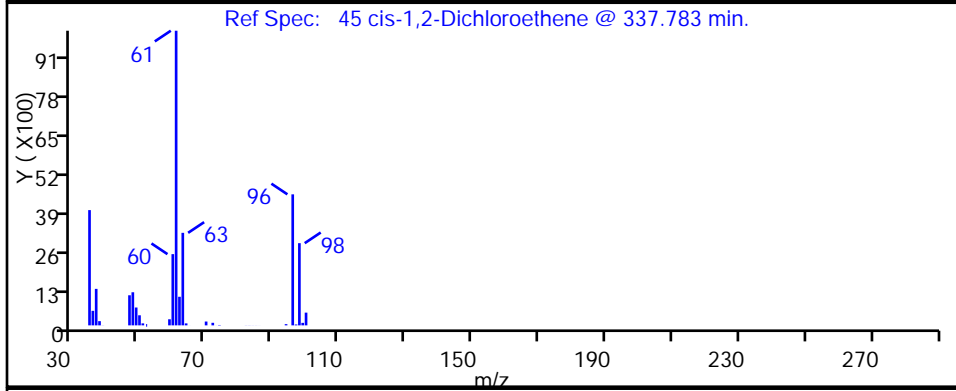
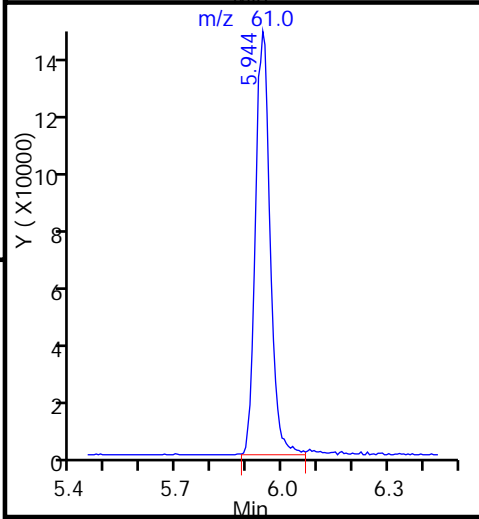
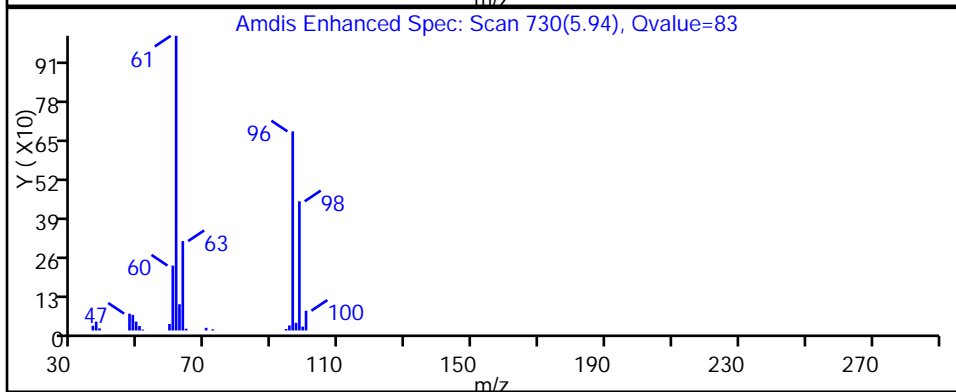
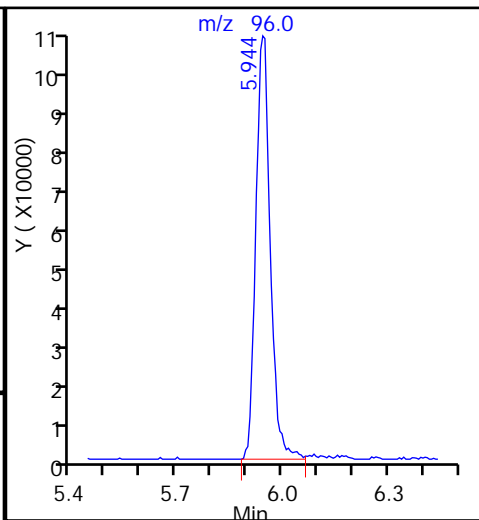
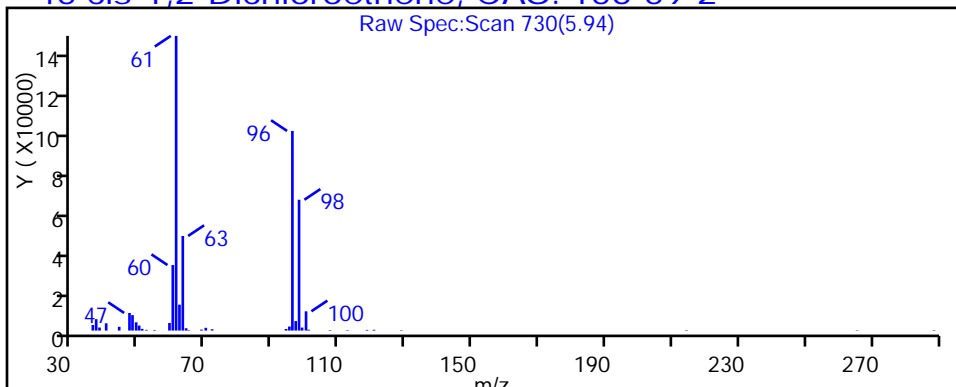
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D

Injection Date: 28-Jan-2015 15:13:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-3

Lab Sample ID: 180-40617-3

Client ID: HD-CW-15A-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 500.0000

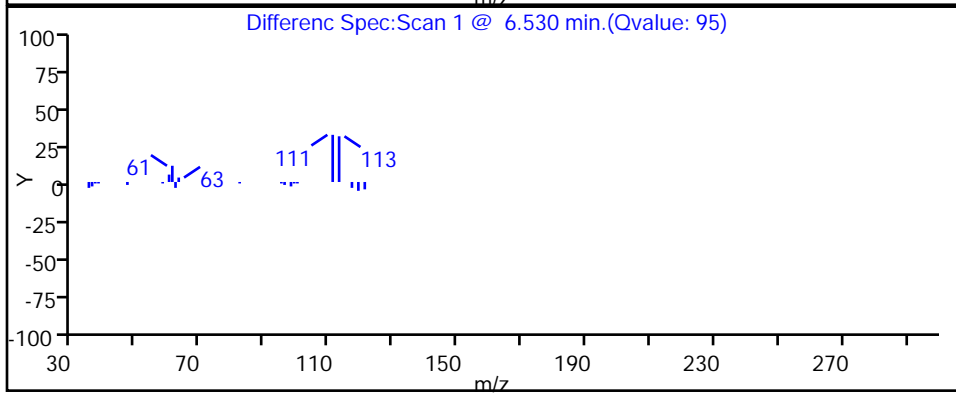
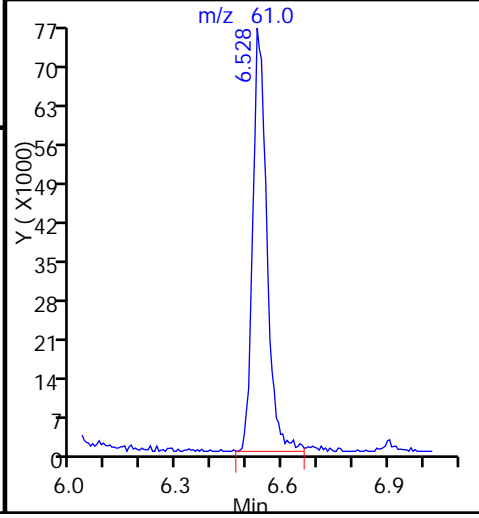
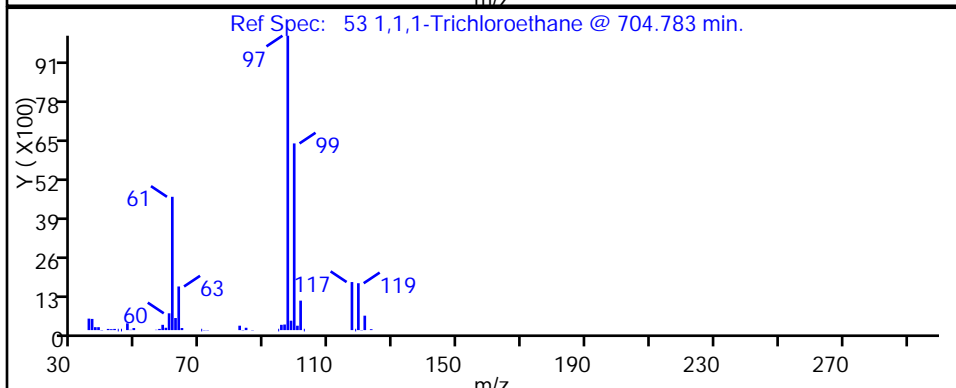
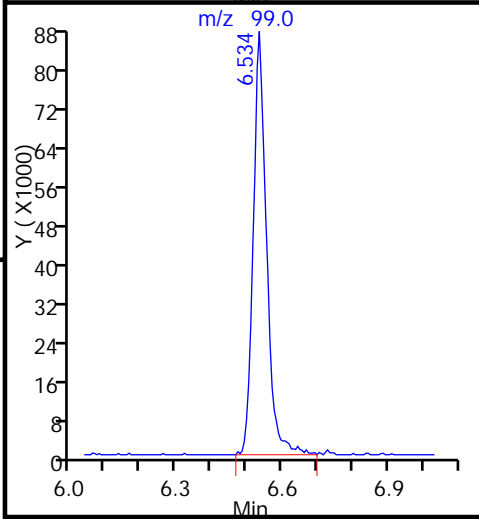
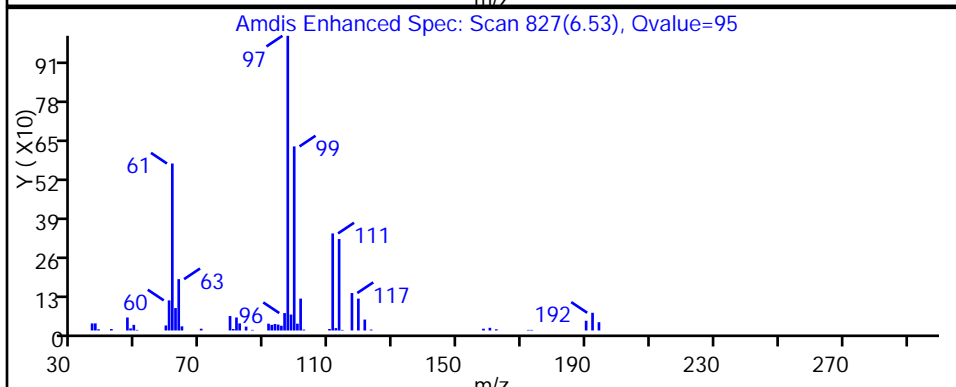
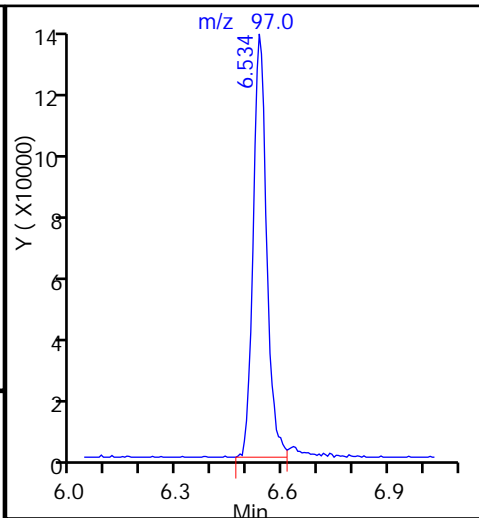
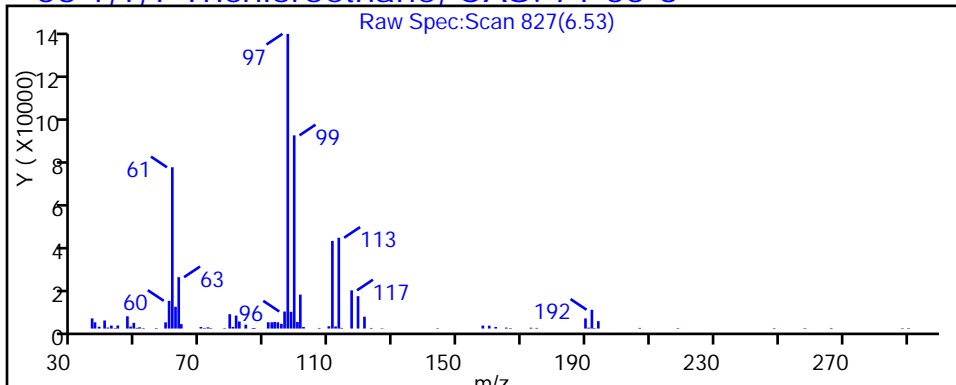
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D

Injection Date: 28-Jan-2015 15:13:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-3

Lab Sample ID: 180-40617-3

Client ID: HD-CW-15A-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 500.0000

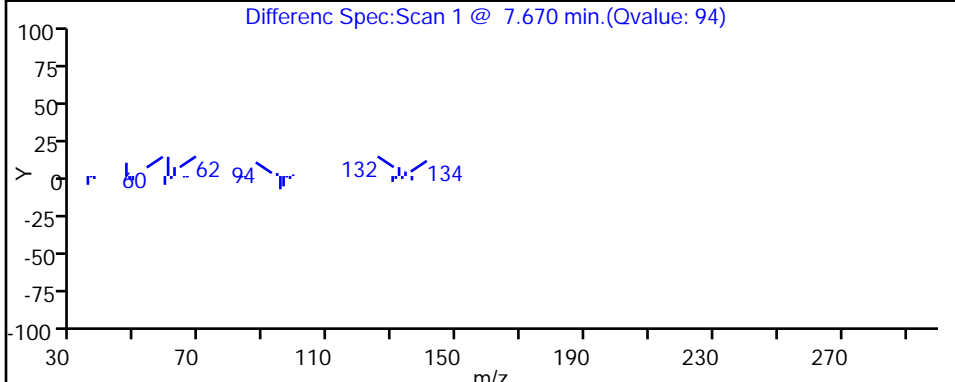
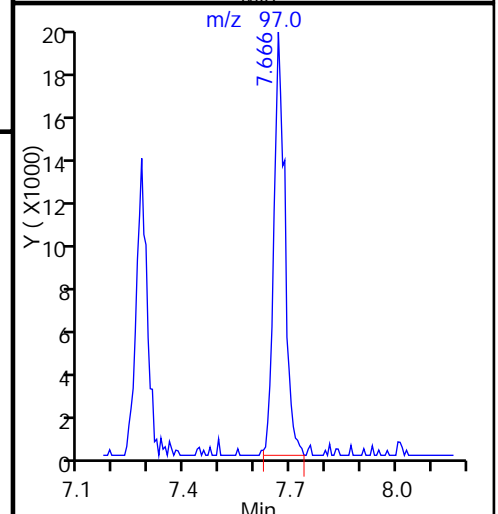
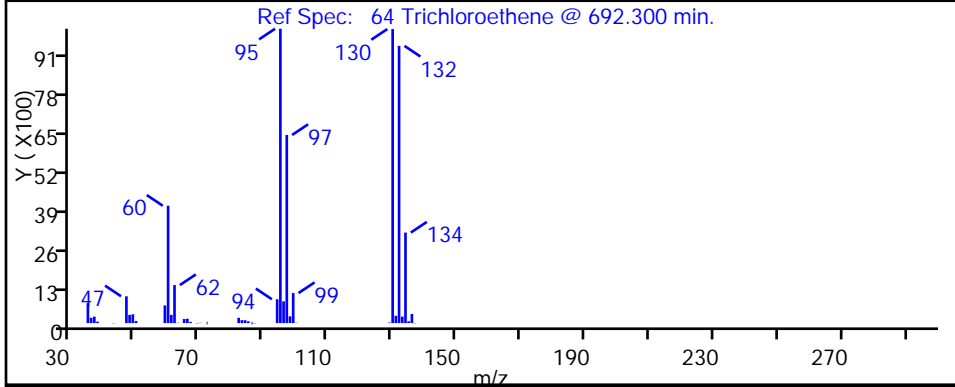
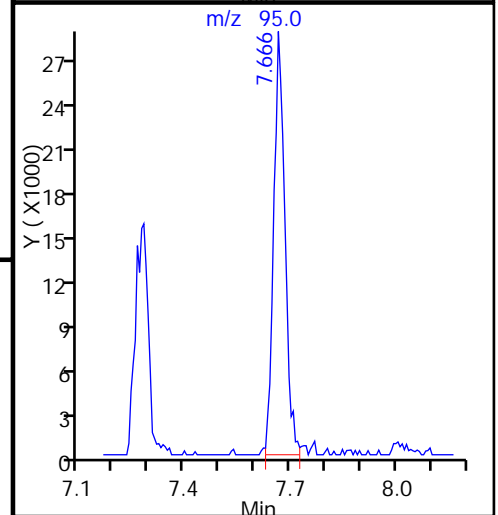
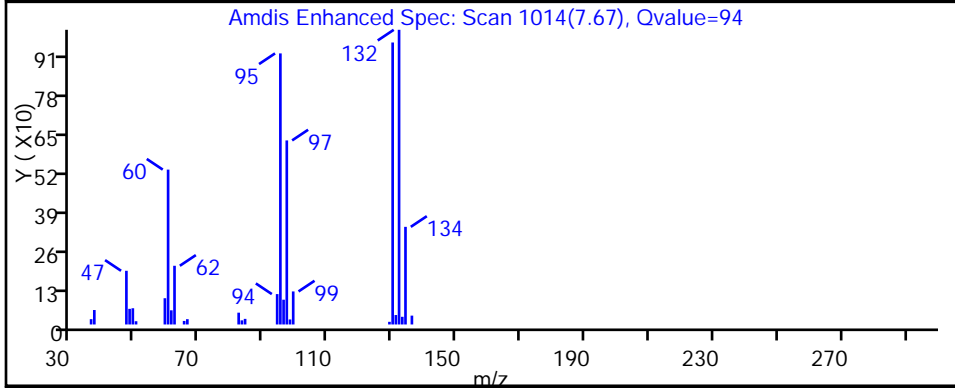
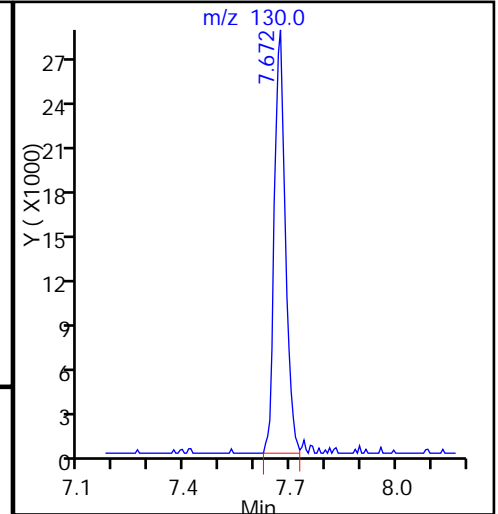
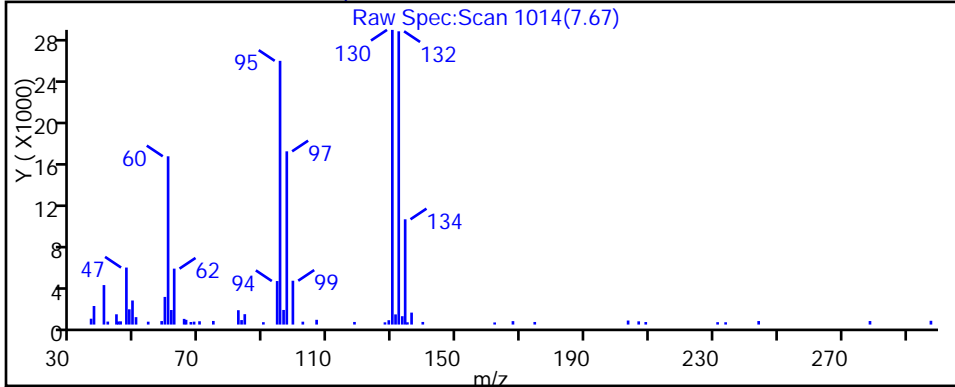
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128016.D

Injection Date: 28-Jan-2015 15:13:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-3

Lab Sample ID: 180-40617-3

Client ID: HD-CW-15A-0/1-0

Operator ID: 001562

ALS Bottle#: 15

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 500.0000

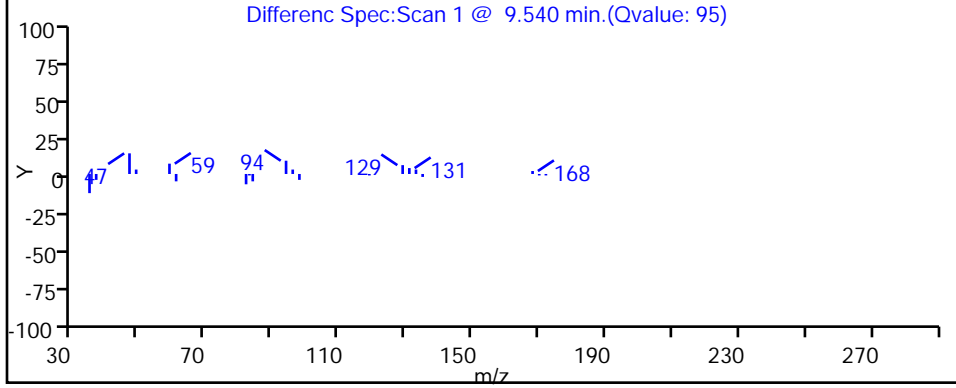
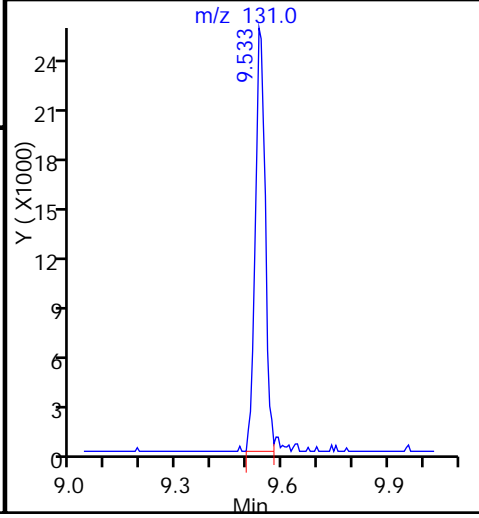
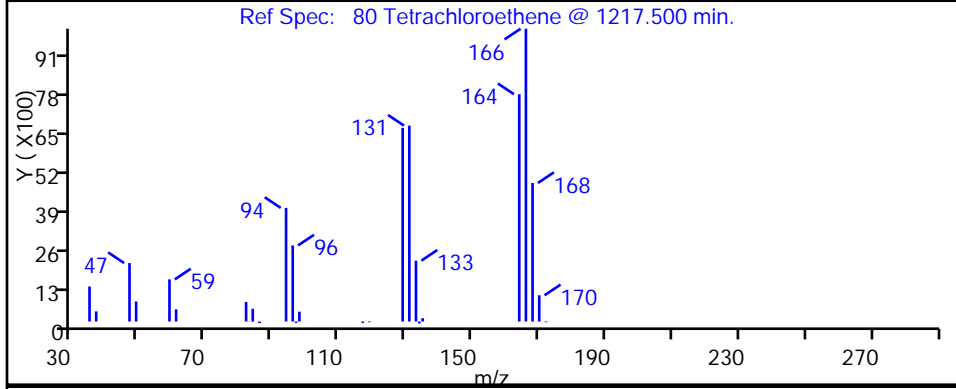
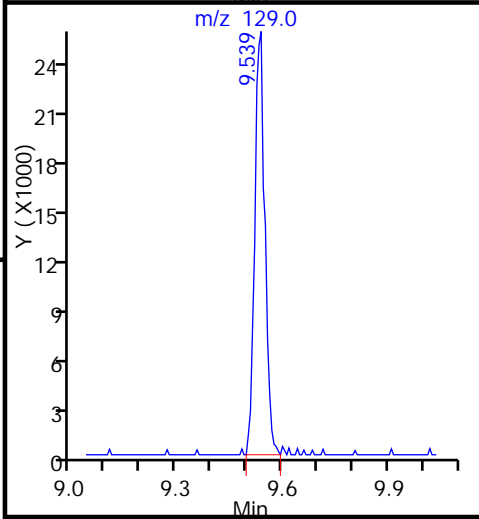
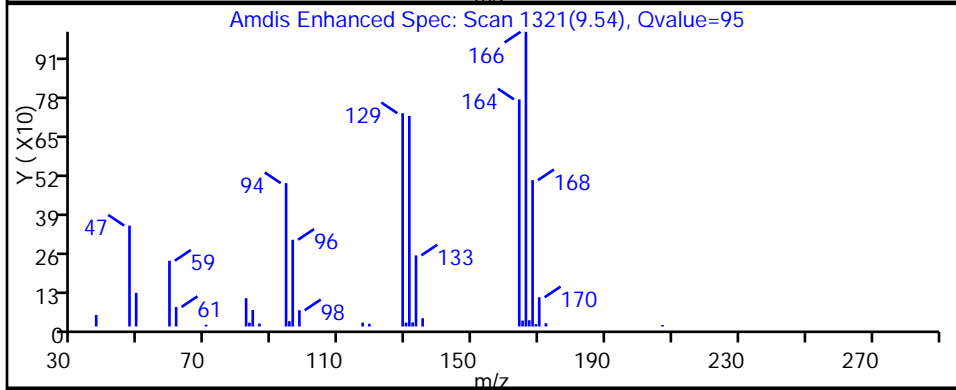
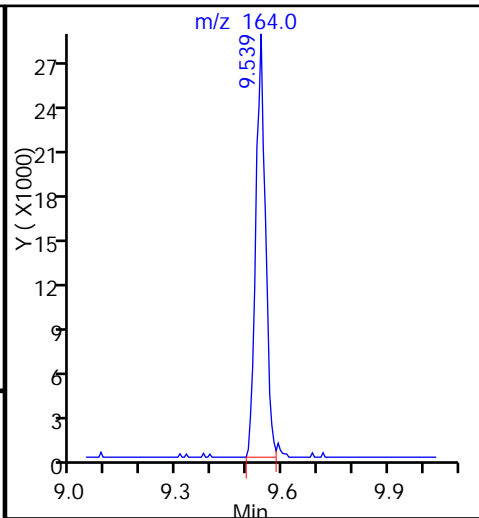
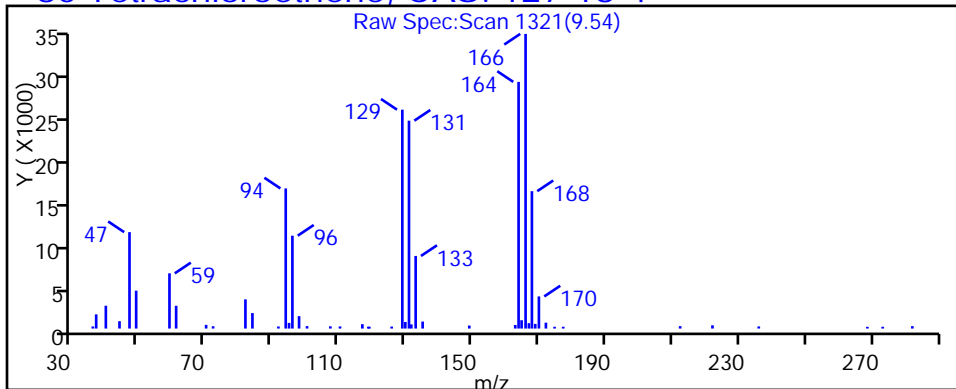
Method: MSVOA\_LL\_CHHP5

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-17-0/1-0 Lab Sample ID: 180-40617-4  
 Matrix: Water Lab File ID: 50128017.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:43  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 15:37  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 5  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	5.0	U	5.0	1.4
75-01-4	Vinyl chloride	5.0	U	5.0	1.1
74-83-9	Bromomethane	5.0	U	5.0	1.6
75-00-3	Chloroethane	5.0	U	5.0	1.1
75-35-4	1,1-Dichloroethene	19		5.0	1.5
67-64-1	Acetone	25	U	25	13
75-15-0	Carbon disulfide	5.0	U	5.0	1.1
75-09-2	Methylene Chloride	5.0	U	5.0	0.63
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.85
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.92
75-34-3	1,1-Dichloroethane	4.4	J	5.0	0.58
156-59-2	cis-1,2-Dichloroethene	250	E	5.0	1.2
74-97-5	Bromochloromethane	5.0	U	5.0	0.90
78-93-3	2-Butanone (MEK)	25	U	25	2.7
67-66-3	Chloroform	5.0	U	5.0	0.85
71-55-6	1,1,1-Trichloroethane	64		5.0	1.4
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.68
71-43-2	Benzene	5.0	U	5.0	0.53
107-06-2	1,2-Dichloroethane	5.0	U	5.0	1.1
79-01-6	Trichloroethene	240	E	5.0	0.72
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.47
75-27-4	Bromodichloromethane	5.0	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.93
108-10-1	4-Methyl-2-pentanone (MIBK)	25	U	25	2.6
108-88-3	Toluene	5.0	U	5.0	0.75
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.74
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	1.0
127-18-4	Tetrachloroethene	290	E	5.0	0.74
591-78-6	2-Hexanone	25	U	25	0.80
124-48-1	Dibromochloromethane	5.0	U	5.0	0.68
106-93-4	1,2-Dibromoethane (EDB)	5.0	U	5.0	0.90
108-90-7	Chlorobenzene	5.0	U	5.0	0.68
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.4
100-41-4	Ethylbenzene	5.0	U	5.0	1.1
1330-20-7	Xylenes, Total	15	U	15	2.4
100-42-5	Styrene	5.0	U	5.0	0.48

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-17-0/1-0 Lab Sample ID: 180-40617-4  
 Matrix: Water Lab File ID: 50128017.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:43  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 15:37  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 5  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	5.0	U	5.0	0.96
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.0
107-13-1	Acrylonitrile	100	U	100	2.7
123-91-1	1,4-Dioxane	1000	U	1000	170

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	96		70-118
1868-53-7	Dibromofluoromethane (Surr)	113		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D  
 Lims ID: 180-40617-D-4 Lab Sample ID: 180-40617-4  
 Client ID: HD-CW-17-0/1-0  
 Sample Type: Client  
 Inject. Date: 28-Jan-2015 15:37:30 ALS Bottle#: 16 Worklist Smp#: 17  
 Purge Vol: 5.000 mL Dil. Factor: 5.0000  
 Sample Info: 180-40617-D-4, 5x  
 Misc. Info.: 180-0005445-017  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 16:36:19 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 16:34:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.293	4.308	-0.015	91	154360	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.276	-0.002	99	420930	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.367	-0.003	97	93790	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.688	12.685	0.003	98	130210	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.532	6.534	-0.002	74	100937	56.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.903	6.899	0.004	92	141776	48.2	
\$ 7 Toluene-d8 (Surr)	98	8.923	8.925	-0.003	95	389374	49.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.535	-0.003	83	142493	47.9	
12 Chloromethane	50		1.783				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.416				ND	
22 1,1-Dichloroethene	96	3.380	3.383	-0.003	95	43920	19.2	
24 Acetone	43		3.499				ND	
26 Carbon disulfide	76		3.675				ND	
31 Methylene Chloride	84		4.156				ND	
33 Acrylonitrile	53		4.557				ND	
34 trans-1,2-Dichloroethene	96		4.563				ND	
35 Methyl tert-butyl ether	73		4.588				ND	
37 1,1-Dichloroethane	63	5.181	5.178	0.003	96	23576	4.37	
45 cis-1,2-Dichloroethene	96	5.942	5.938	0.004	84	628793	250.6	E
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.224				ND	
52 Chloroform	83	6.331	6.352	-0.021	15	3147	0.7708	M
53 1,1,1-Trichloroethane	97	6.532	6.534	-0.002	93	169320	63.9	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.990				ND	
64 Trichloroethene	130	7.669	7.666	0.003	96	525314	235.7	E
67 1,2-Dichloropropane	63		7.903				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.657				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.223				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.537	9.539	-0.002	95	533272	290.4	E
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.904				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.476				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.622				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.218				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

### QC Flag Legend

#### Processing Flags

E - Exceeded Maximum Amount

#### Review Flags

M - Manually Integrated

### Reagents:

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D

Injection Date: 28-Jan-2015 15:37:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-D-4

Lab Sample ID: 180-40617-4

Worklist Smp#: 17

Client ID: HD-CW-17-0/1-0

Purge Vol: 5.000 mL

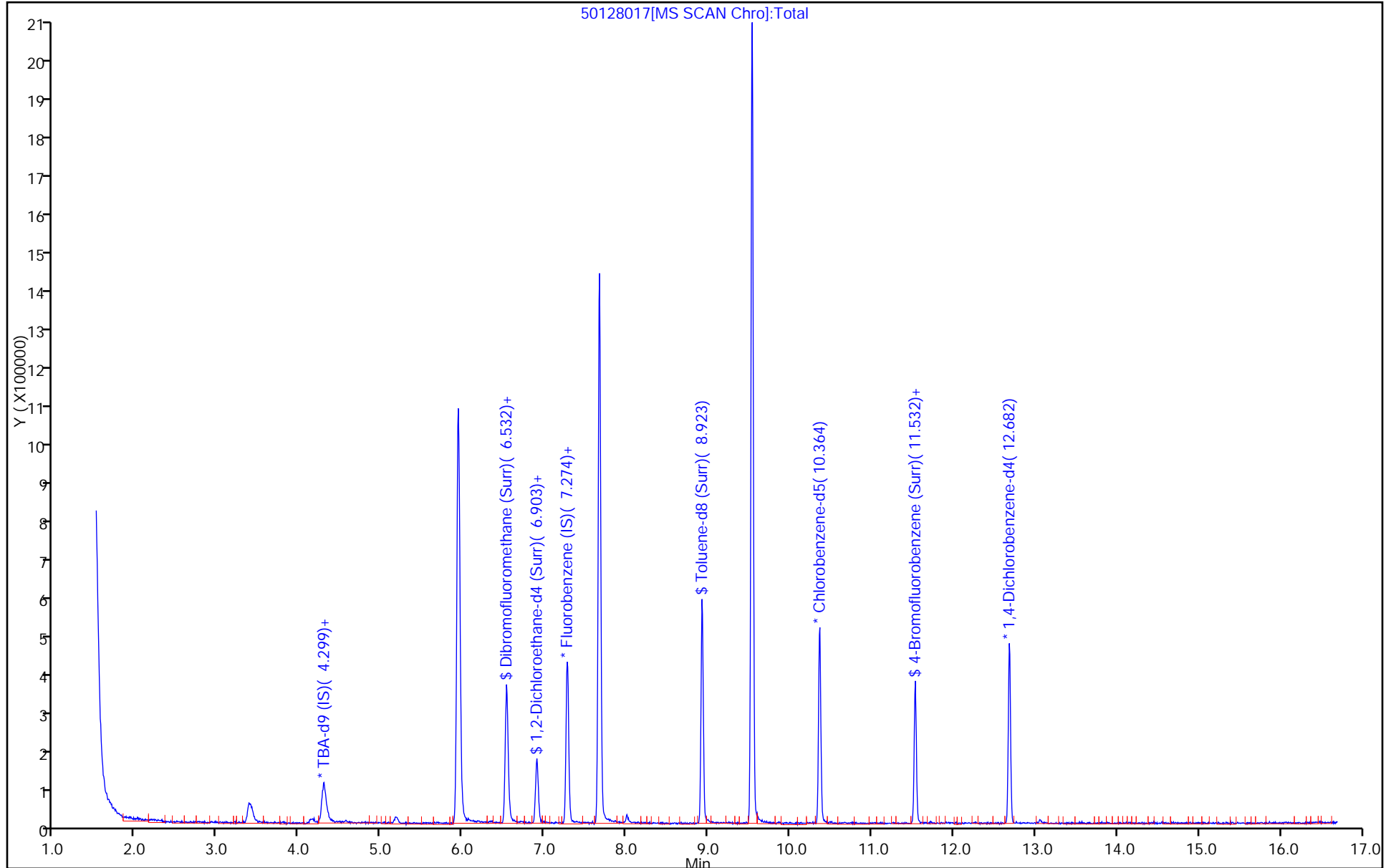
Dil. Factor: 5.0000

ALS Bottle#: 16

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D

Injection Date: 28-Jan-2015 15:37:30

Instrument ID: CHHP5

Lims ID: 180-40617-D-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

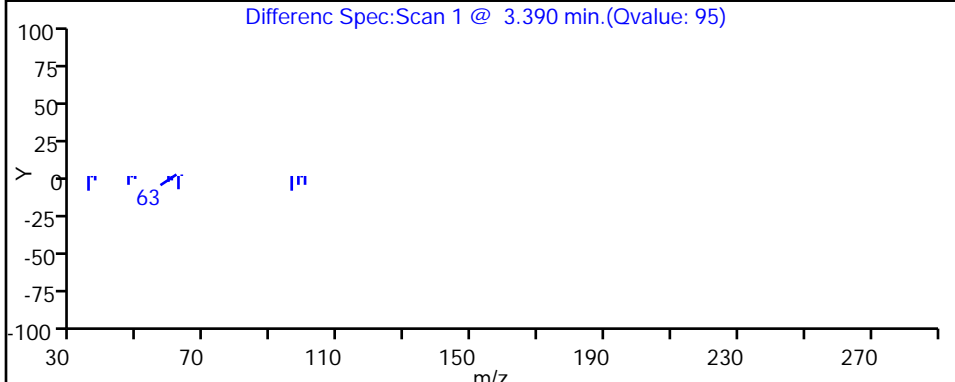
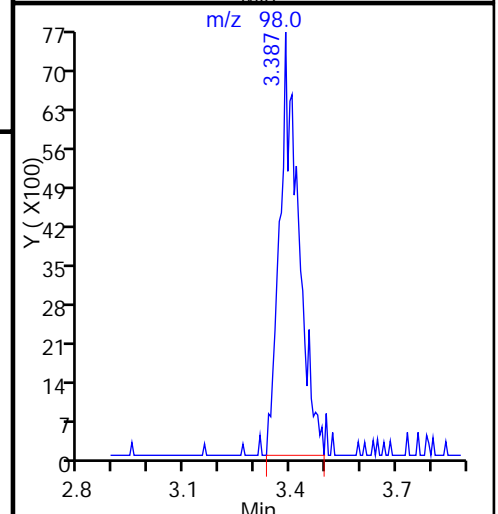
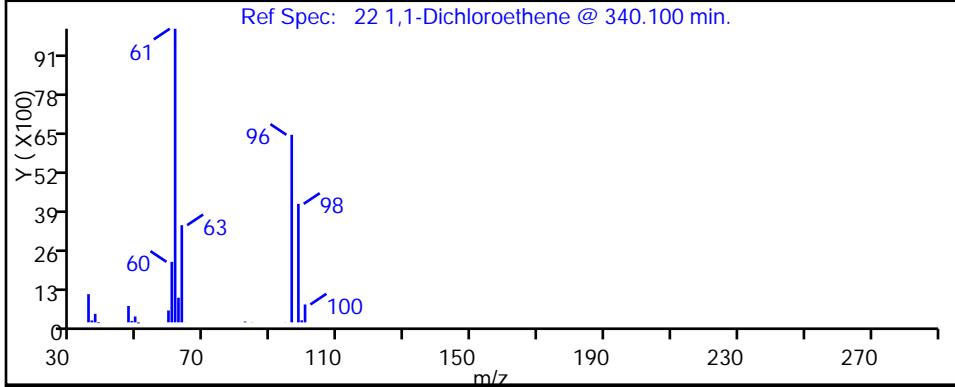
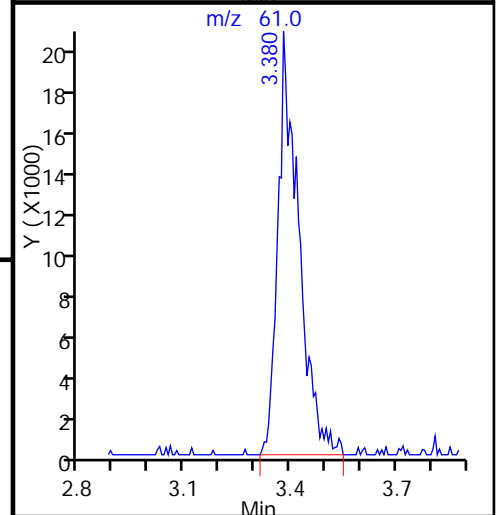
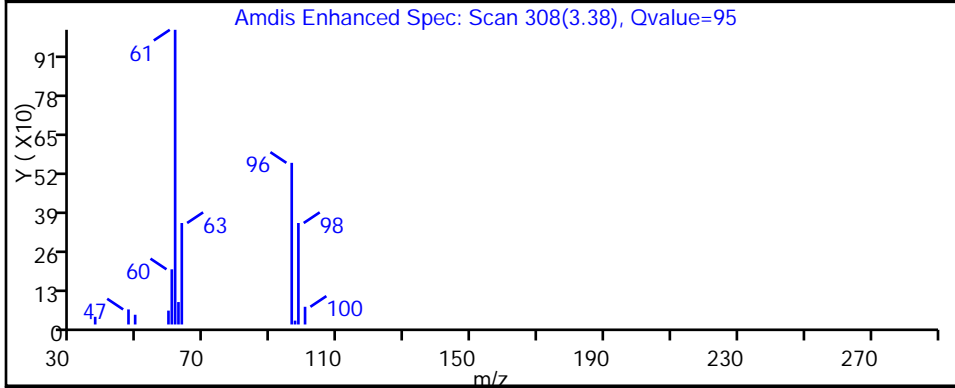
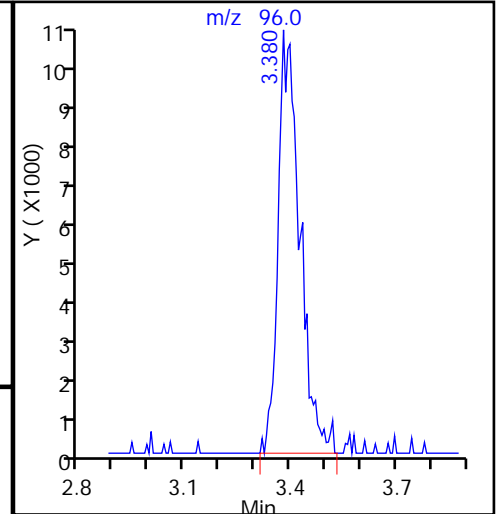
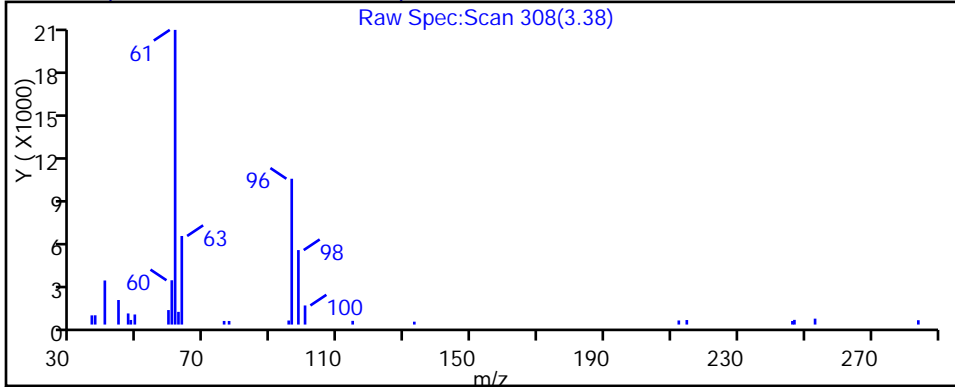
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

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





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D

Injection Date: 28-Jan-2015 15:37:30

Instrument ID: CHHP5

Lims ID: 180-40617-D-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

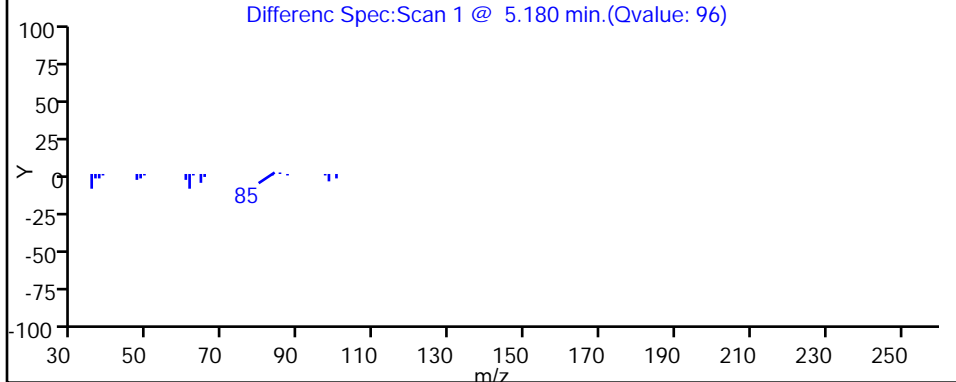
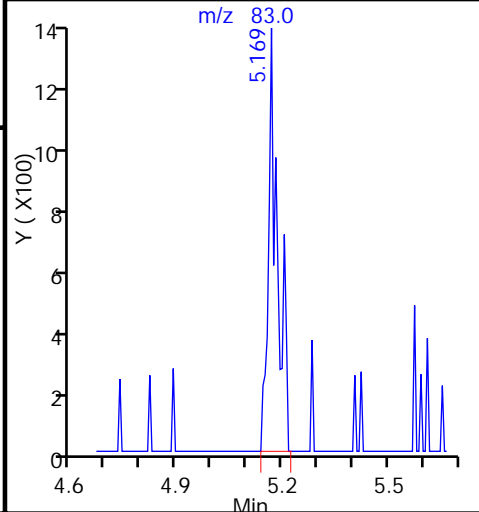
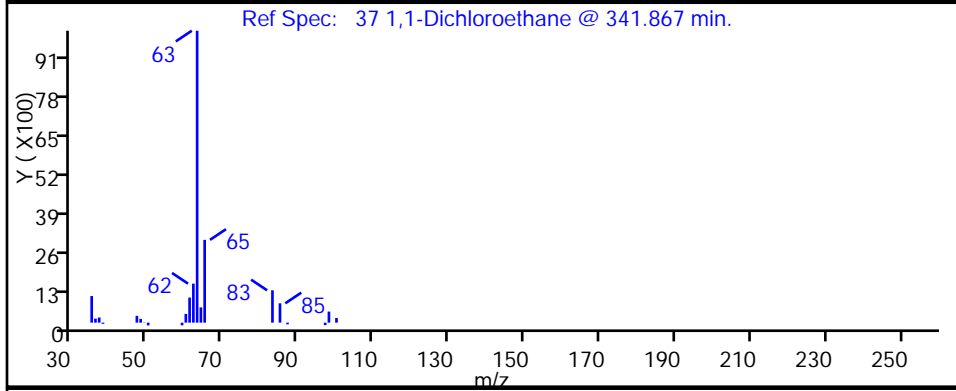
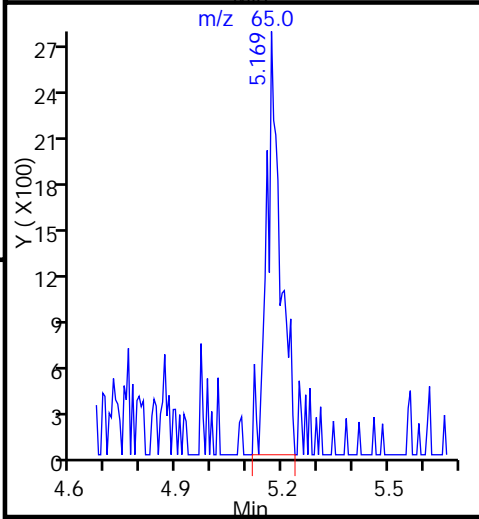
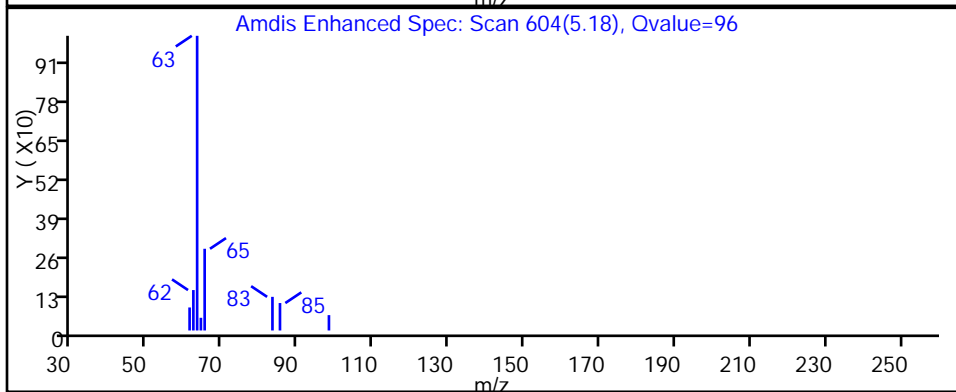
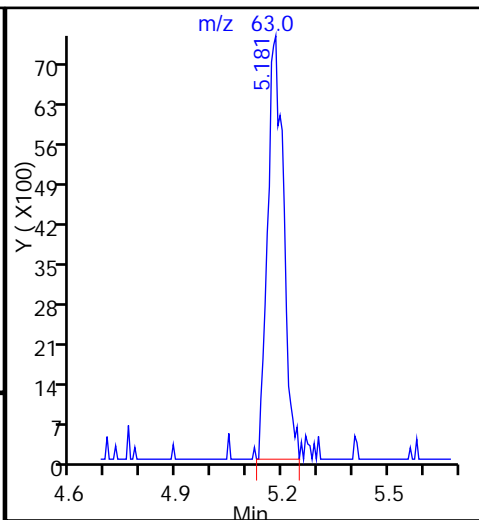
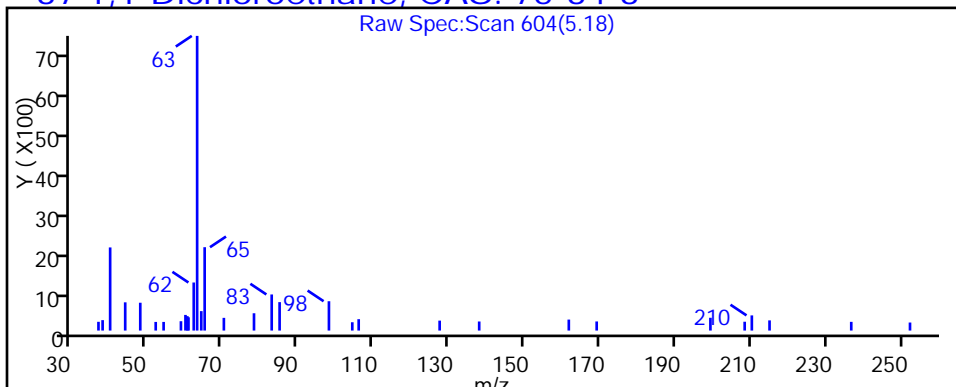
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

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



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D

Injection Date: 28-Jan-2015 15:37:30

Instrument ID: CHHP5

Lims ID: 180-40617-D-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

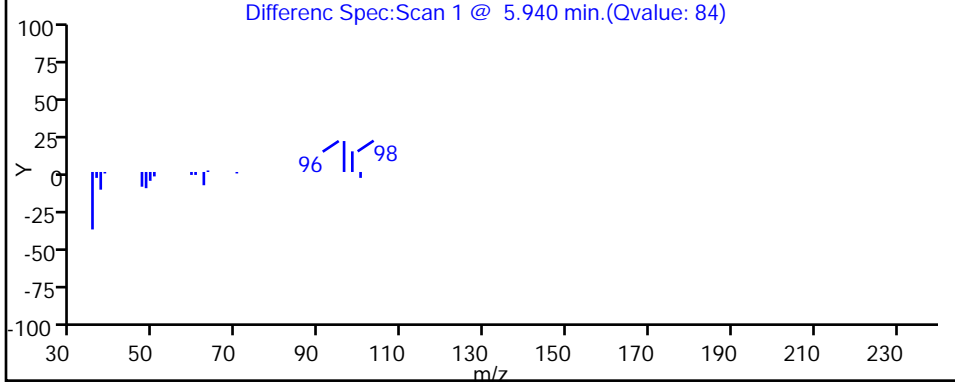
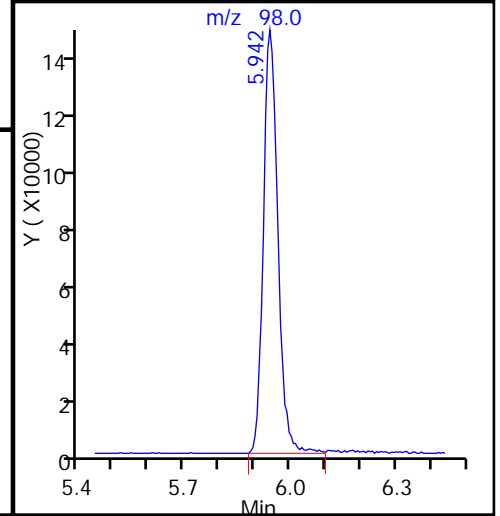
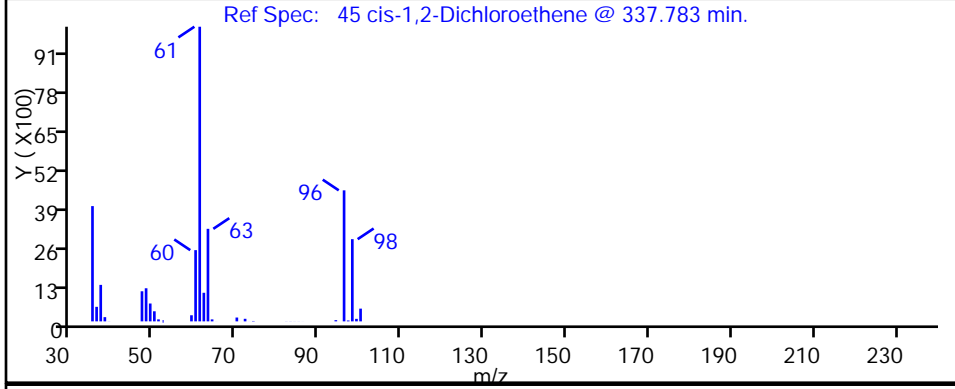
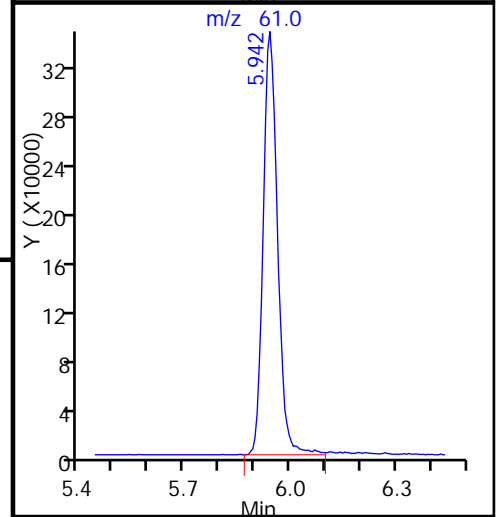
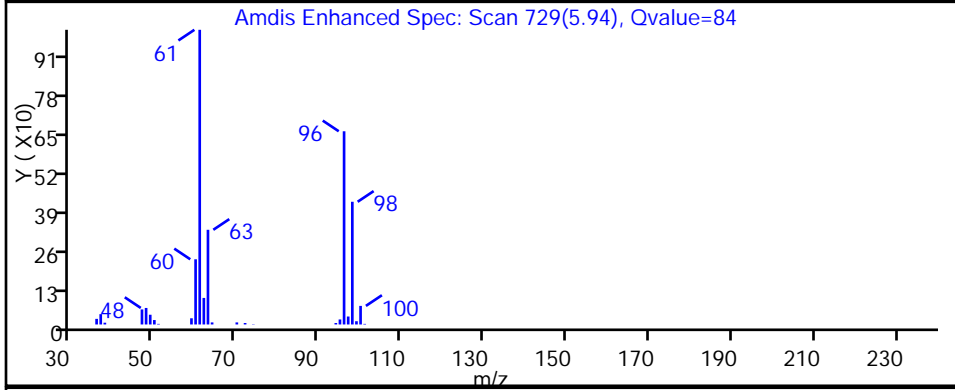
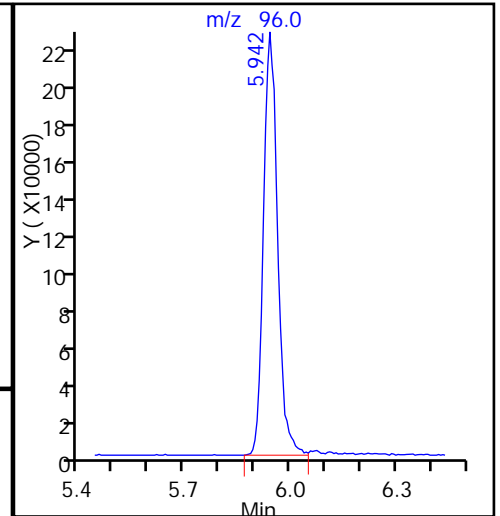
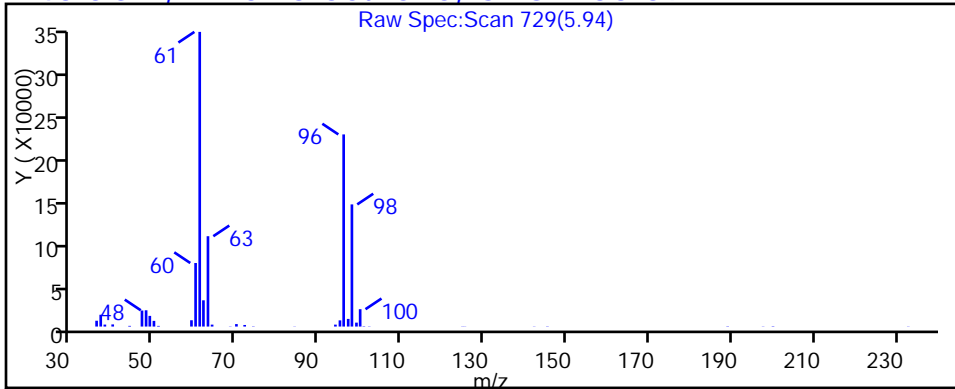
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

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



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D

Injection Date: 28-Jan-2015 15:37:30

Instrument ID: CHHP5

Lims ID: 180-40617-D-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

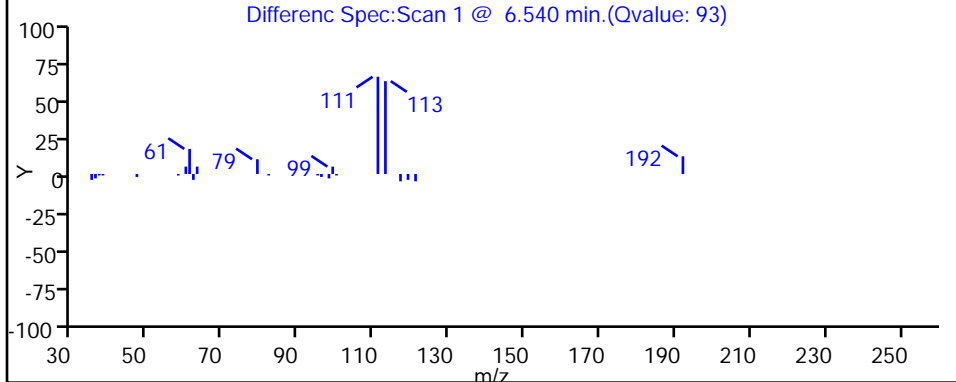
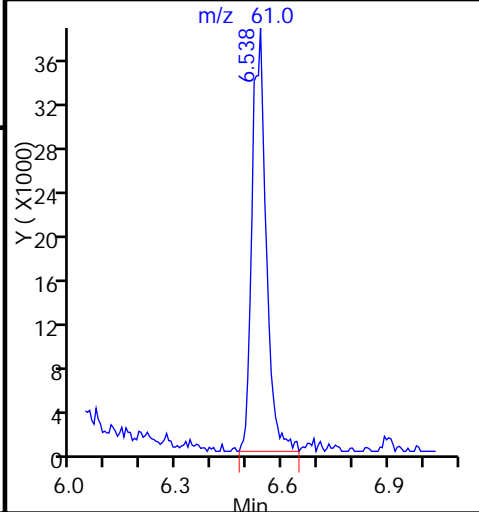
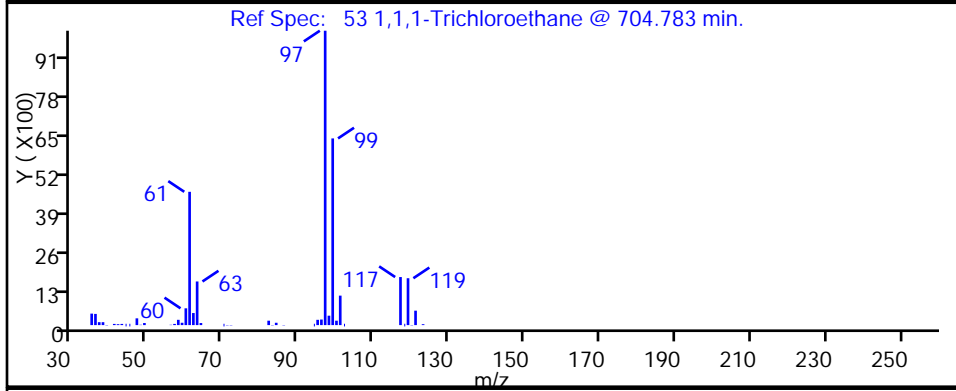
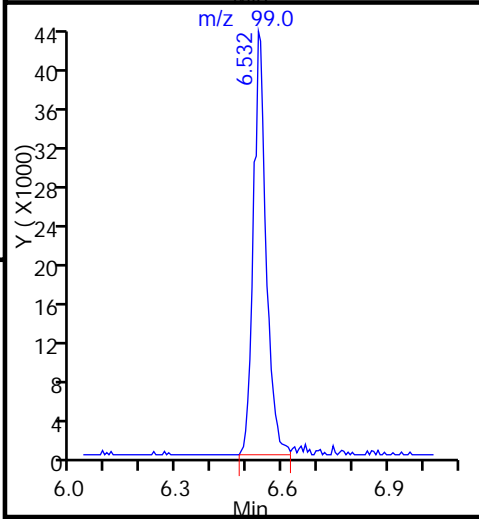
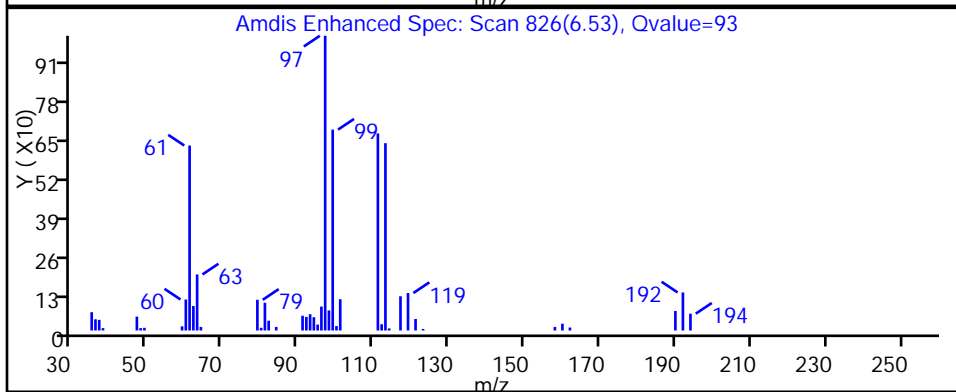
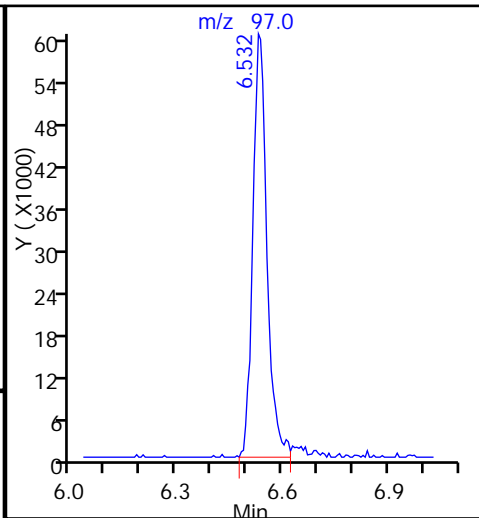
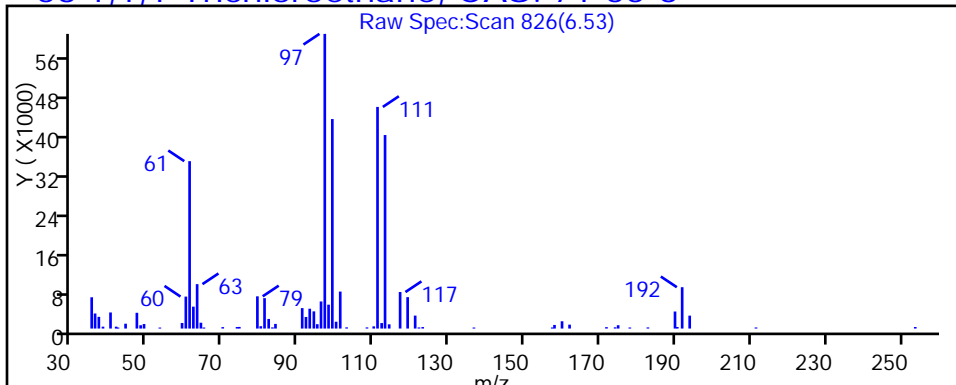
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

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



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D

Injection Date: 28-Jan-2015 15:37:30

Instrument ID: CHHP5

Lims ID: 180-40617-D-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

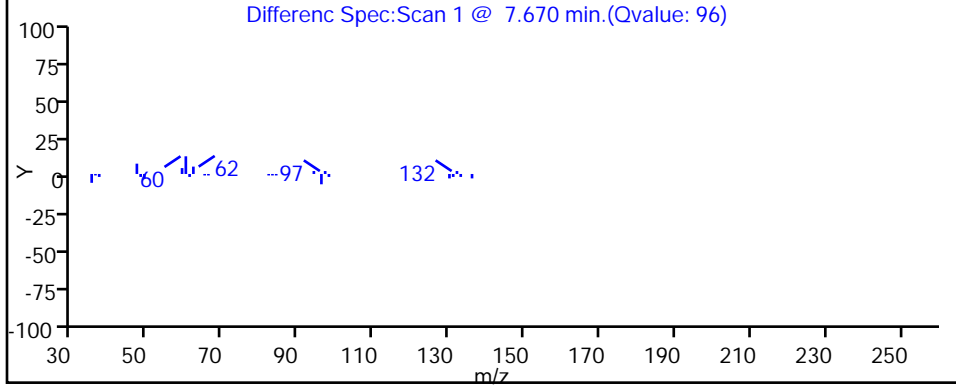
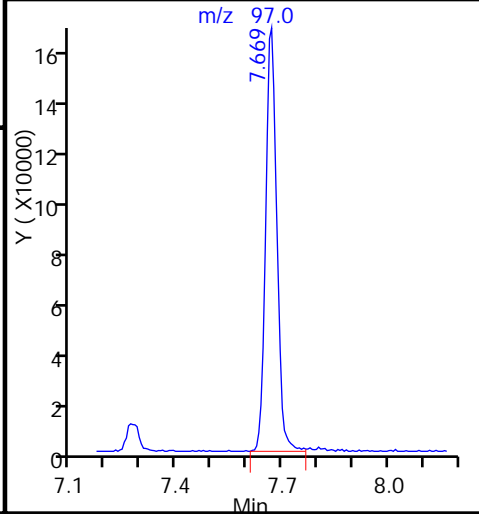
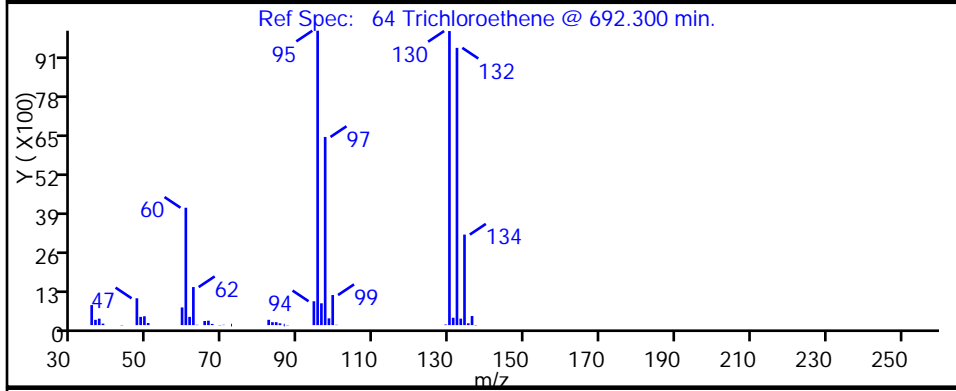
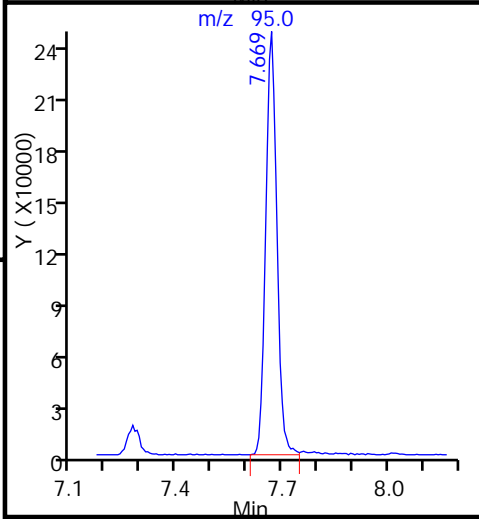
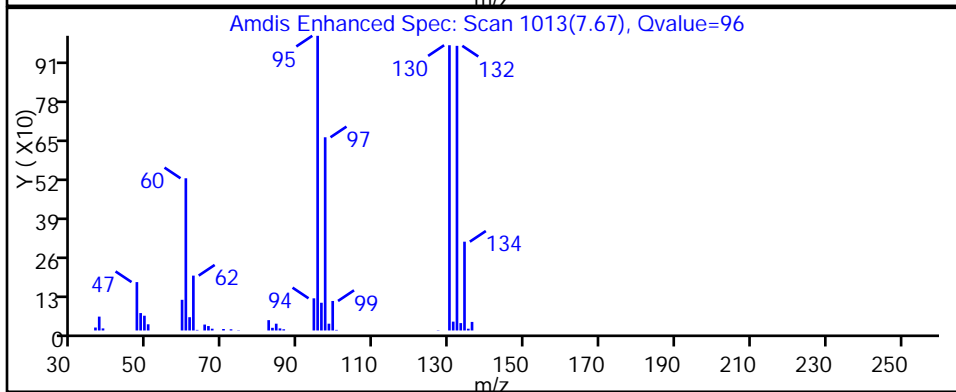
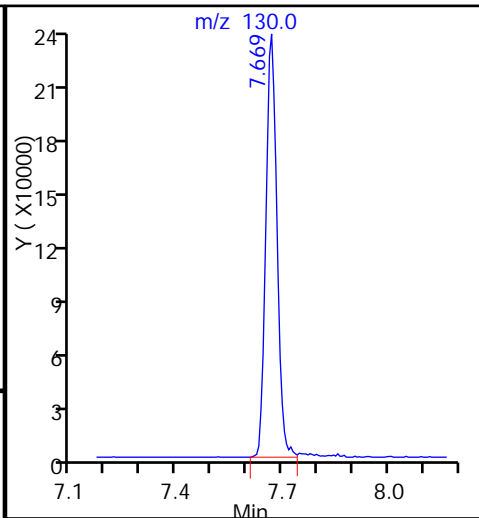
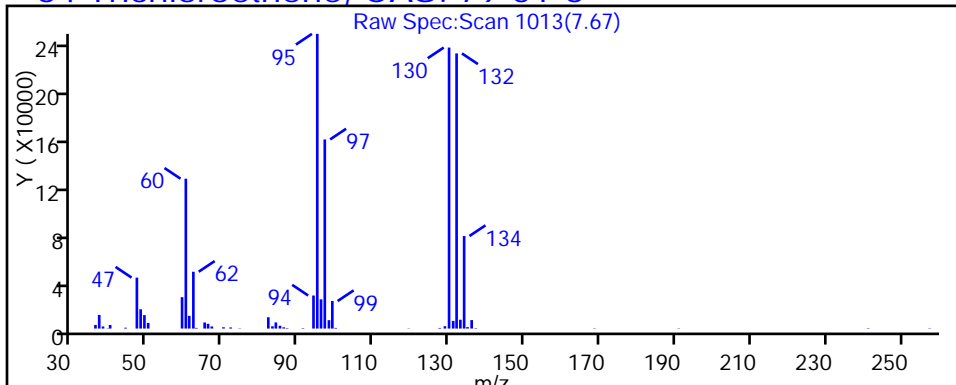
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D

Injection Date: 28-Jan-2015 15:37:30

Instrument ID: CHHP5

Lims ID: 180-40617-D-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 5.000 mL

Dil. Factor: 5.0000

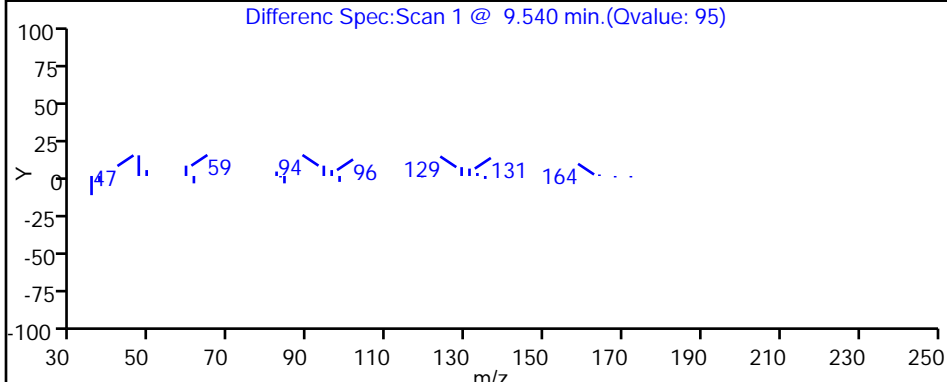
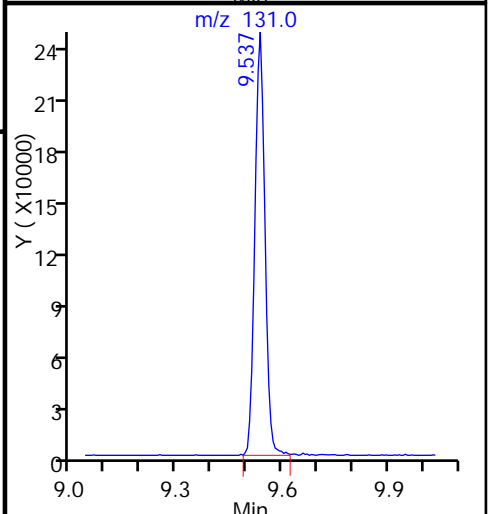
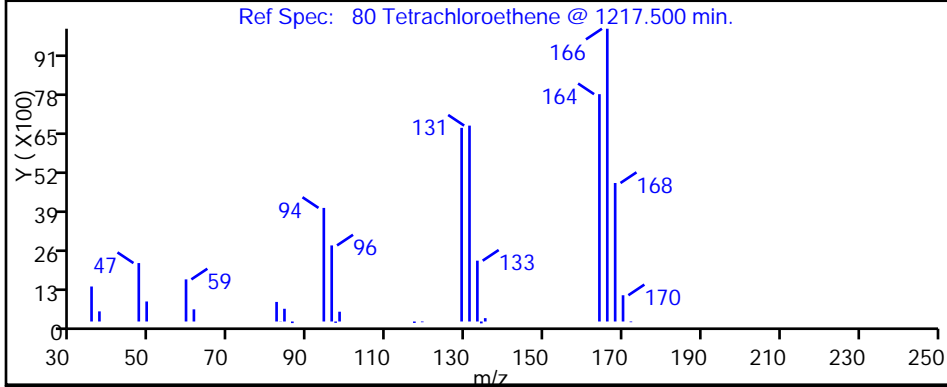
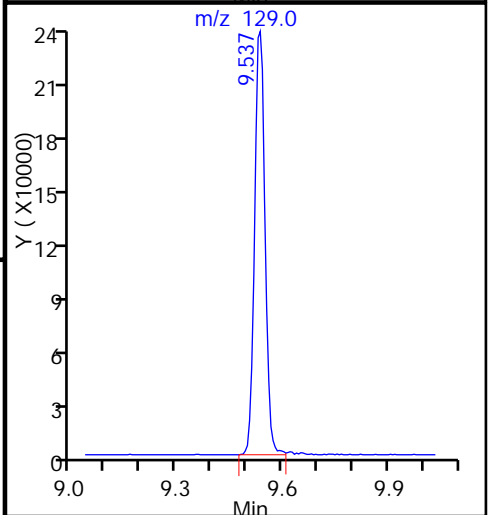
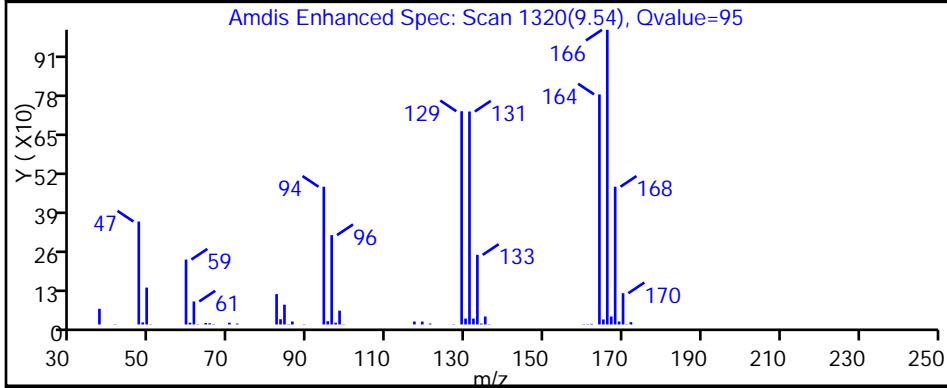
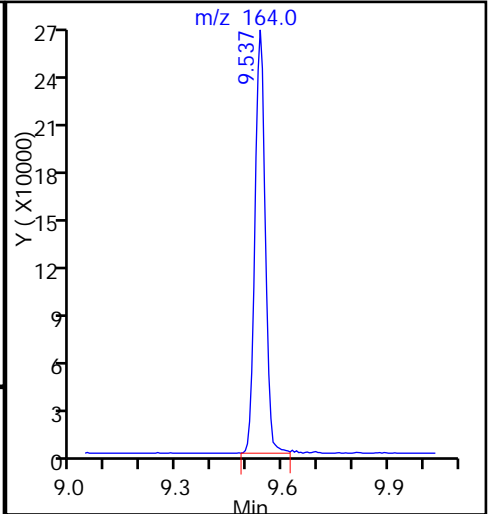
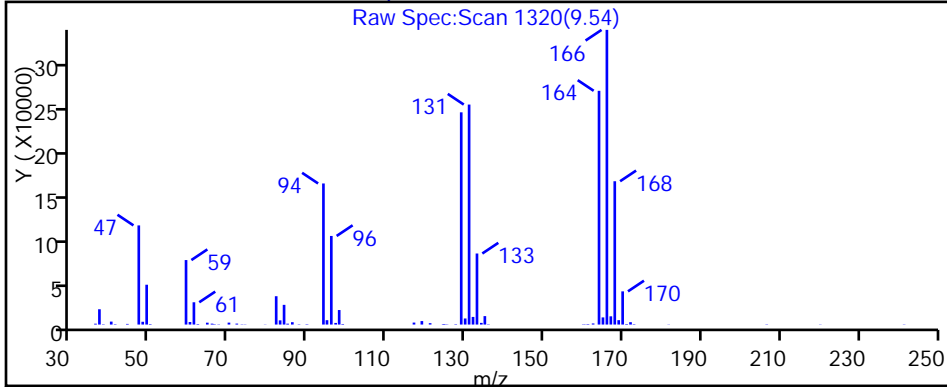
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4



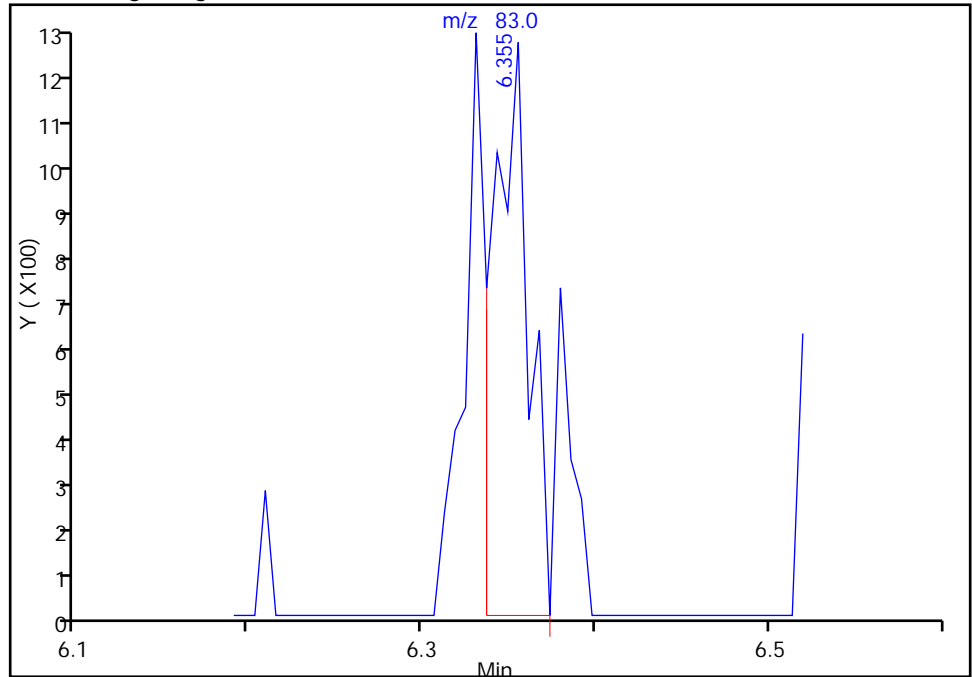
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128017.D  
Injection Date: 28-Jan-2015 15:37:30 Instrument ID: CHHP5  
Lims ID: 180-40617-D-4 Lab Sample ID: 180-40617-4  
Client ID: HD-CW-17-0/1-0  
Operator ID: 001562 ALS Bottle#: 16 Worklist Smp#: 17  
Purge Vol: 5.000 mL Dil. Factor: 5.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

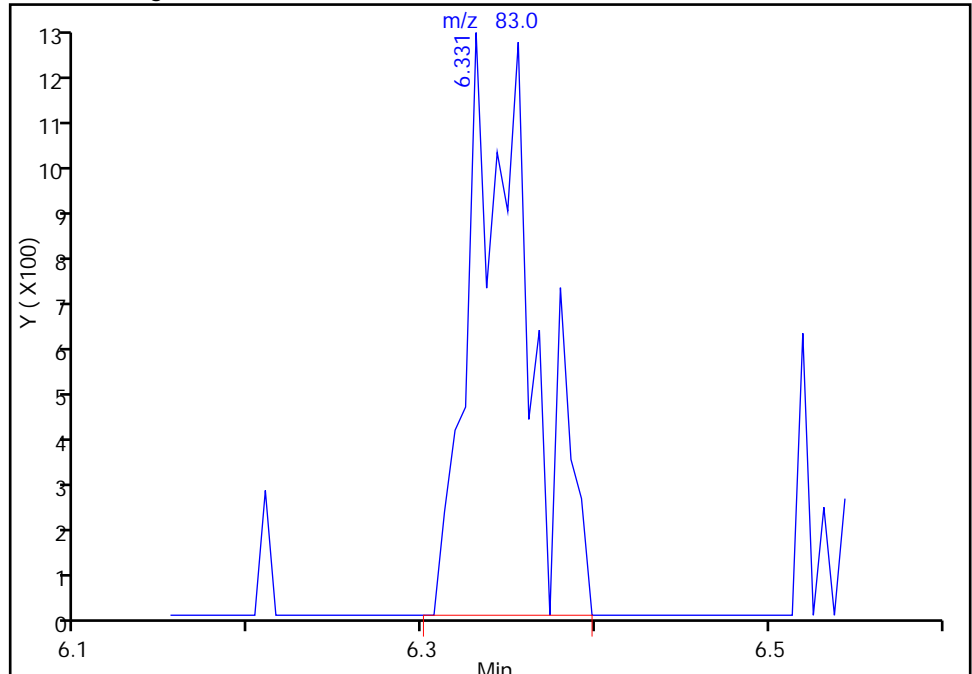
RT: 6.36  
Area: 1802  
Amount: 0.441362  
Amount Units: ng

Processing Integration Results



RT: 6.33  
Area: 3147  
Amount: 0.770791  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 28-Jan-2015 16:34:40  
Audit Action: Manually Integrated  
Audit Reason: Split Peak

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-17-0/1-0 DL Lab Sample ID: 180-40617-4 DL  
 Matrix: Water Lab File ID: 50130016.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:43  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 16:10  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 20  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 132193 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	20	U	20	5.7
75-01-4	Vinyl chloride	20	U	20	4.5
74-83-9	Bromomethane	20	U	20	6.3
75-00-3	Chloroethane	20	U	20	4.3
75-35-4	1,1-Dichloroethene	22		20	5.9
67-64-1	Acetone	100	U	100	50
75-15-0	Carbon disulfide	20	U	20	4.2
75-09-2	Methylene Chloride	20	U	20	2.5
156-60-5	trans-1,2-Dichloroethene	20	U	20	3.4
1634-04-4	Methyl tert-butyl ether	20	U	20	3.7
75-34-3	1,1-Dichloroethane	4.6	J	20	2.3
156-59-2	cis-1,2-Dichloroethene	260		20	4.7
74-97-5	Bromochloromethane	20	U	20	3.6
78-93-3	2-Butanone (MEK)	100	U	100	11
67-66-3	Chloroform	20	U	20	3.4
71-55-6	1,1,1-Trichloroethane	70		20	5.7
56-23-5	Carbon tetrachloride	20	U	20	2.7
71-43-2	Benzene	20	U	20	2.1
107-06-2	1,2-Dichloroethane	20	U	20	4.2
79-01-6	Trichloroethene	230		20	2.9
78-87-5	1,2-Dichloropropane	20	U	20	1.9
75-27-4	Bromodichloromethane	20	U	20	2.6
10061-01-5	cis-1,3-Dichloropropene	20	U	20	3.7
108-10-1	4-Methyl-2-pentanone (MIBK)	100	U	100	11
108-88-3	Toluene	20	U	20	3.0
10061-02-6	trans-1,3-Dichloropropene	20	U	20	3.0
79-00-5	1,1,2-Trichloroethane	20	U	20	4.0
127-18-4	Tetrachloroethene	290		20	3.0
591-78-6	2-Hexanone	100	U	100	3.2
124-48-1	Dibromochloromethane	20	U	20	2.7
106-93-4	1,2-Dibromoethane (EDB)	20	U	20	3.6
108-90-7	Chlorobenzene	20	U	20	2.7
630-20-6	1,1,1,2-Tetrachloroethane	20	U	20	5.5
100-41-4	Ethylbenzene	20	U	20	4.5
1330-20-7	Xylenes, Total	60	U	60	9.8
100-42-5	Styrene	20	U	20	1.9

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-17-0/1-0 DL Lab Sample ID: 180-40617-4 DL  
 Matrix: Water Lab File ID: 50130016.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:43  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 16:10  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 20  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 132193 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	20	U	20	3.8
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	4.0
107-13-1	Acrylonitrile	400	U	400	11
123-91-1	1,4-Dioxane	4000	U	4000	690

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		64-135
2037-26-5	Toluene-d8 (Surr)	94		71-118
460-00-4	4-Bromofluorobenzene (Surr)	96		70-118
1868-53-7	Dibromofluoromethane (Surr)	119		70-128



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D  
 Lims ID: 180-40617-E-4 Lab Sample ID: 180-40617-4  
 Client ID: HD-CW-17-0/1-0  
 Sample Type: Client  
 Inject. Date: 30-Jan-2015 16:10:30 ALS Bottle#: 16 Worklist Smp#: 16  
 Purge Vol: 5.000 mL Dil. Factor: 20.0000  
 Sample Info: 180-40617-E-4, 20x  
 Misc. Info.: 180-0005479-016  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 02-Feb-2015 08:56:12 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK017

First Level Reviewer: fergusond

Date: 02-Feb-2015 08:56:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.301	4.308	-0.007	88	166924	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.271	0.005	98	408439	50.0	
* 3 Chlorobenzene-d5	119	10.360	10.368	-0.008	98	93707	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.684	12.685	-0.001	98	135259	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.528	6.523	0.005	92	103234	59.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.900	-0.001	93	143996	50.4	
\$ 7 Toluene-d8 (Surr)	98	8.925	8.926	-0.001	95	367428	47.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.529	0.005	83	142607	48.0	
12 Chloromethane	50		1.790				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.422				ND	
22 1,1-Dichloroethene	96	3.389	3.384	0.005	97	12050	5.42	
24 Acetone	43		3.505				ND	
26 Carbon disulfide	76		3.676				ND	
31 Methylene Chloride	84		4.144				ND	
33 Acrylonitrile	53		4.552				ND	
34 trans-1,2-Dichloroethene	96		4.564				ND	
35 Methyl tert-butyl ether	73		4.594				ND	
37 1,1-Dichloroethane	63	5.189	5.172	0.017	1	6058	1.16	
45 cis-1,2-Dichloroethene	96	5.944	5.945	-0.001	84	158287	65.0	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.231				ND	
52 Chloroform	83		6.346				ND	
53 1,1,1-Trichloroethane	97	6.528	6.529	-0.001	62	44877	17.5	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.955				ND	
59 1,2-Dichloroethane	62		6.979				ND	
64 Trichloroethene	130	7.672	7.666	0.006	95	125542	58.1	
67 1,2-Dichloropropane	63		7.904				ND	
70 1,4-Dioxane	88		8.056				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.196				ND	
74 cis-1,3-Dichloropropene	75		8.658				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.993				ND	
77 trans-1,3-Dichloropropene	75		9.218				ND	
79 1,1,2-Trichloroethane	97		9.394				ND	
80 Tetrachloroethene	164	9.539	9.534	0.005	96	132770	72.4	
82 2-Hexanone	43		9.656				ND	
84 Chlorodibromomethane	129		9.796				ND	
85 Ethylene Dibromide	107		9.899				ND	
87 Chlorobenzene	112		10.392				ND	
89 1,1,1,2-Tetrachloroethane	131		10.471				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.617				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.025				ND	
94 Bromoform	173		11.213				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D

Injection Date: 30-Jan-2015 16:10:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-E-4

Lab Sample ID: 180-40617-4

Worklist Smp#: 16

Client ID: HD-CW-17-0/1-0

Purge Vol: 5.000 mL

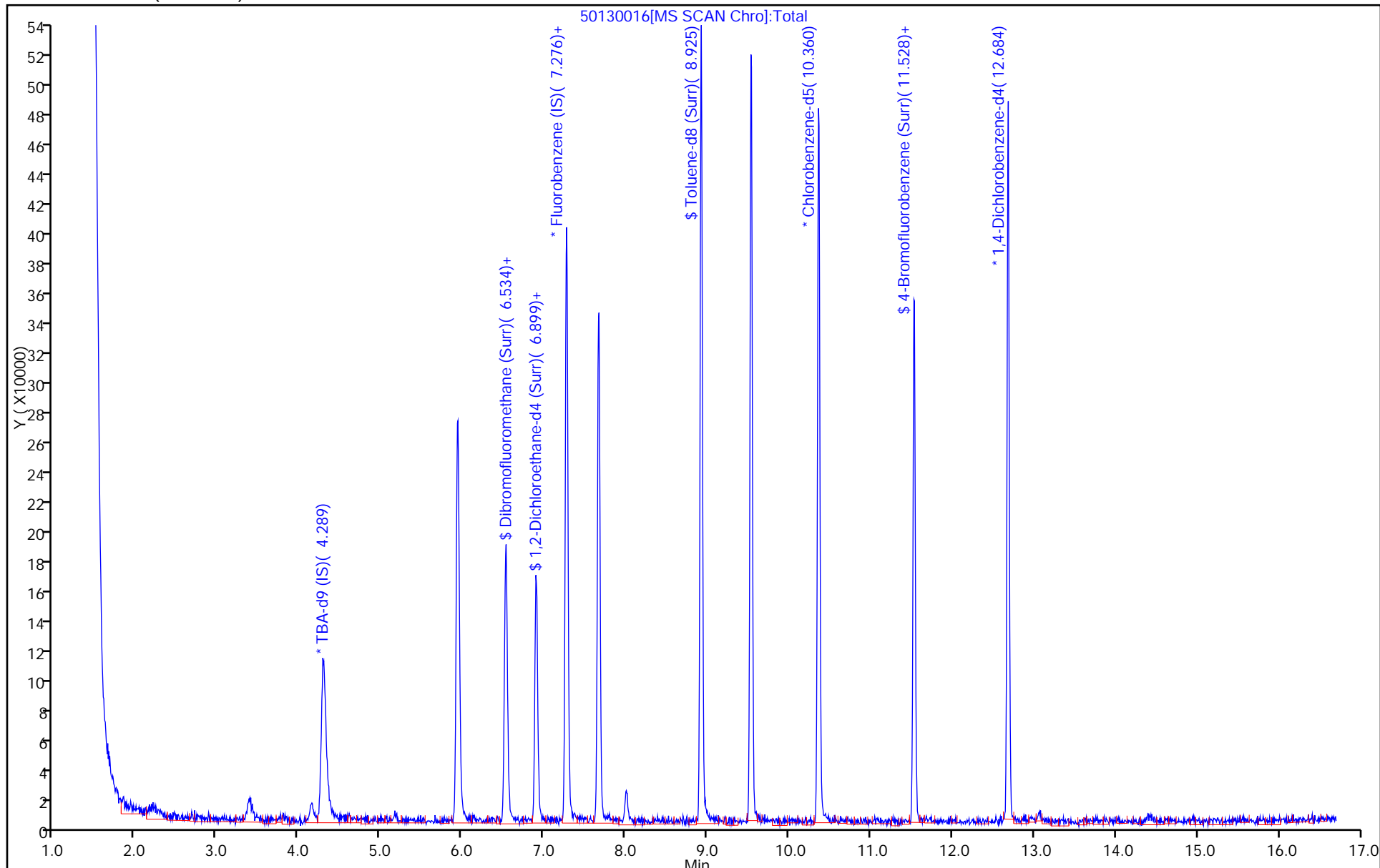
Dil. Factor: 20.0000

ALS Bottle#: 16

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D

Injection Date: 30-Jan-2015 16:10:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 20.0000

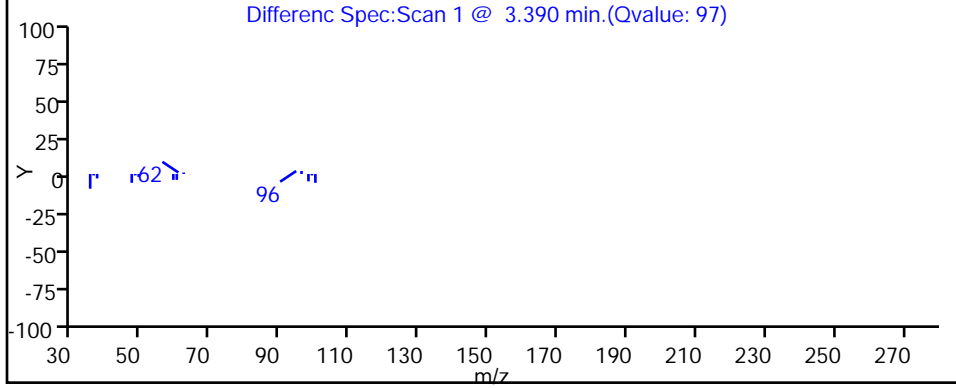
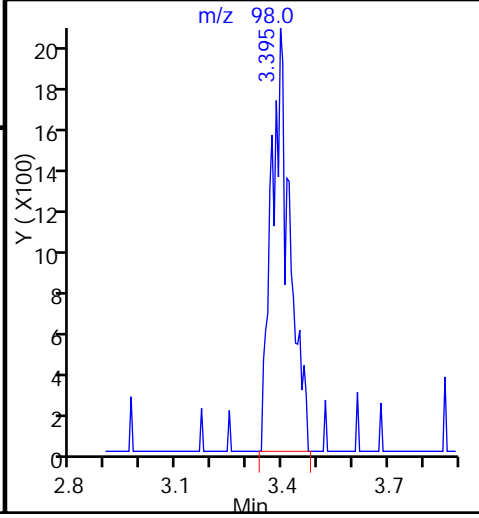
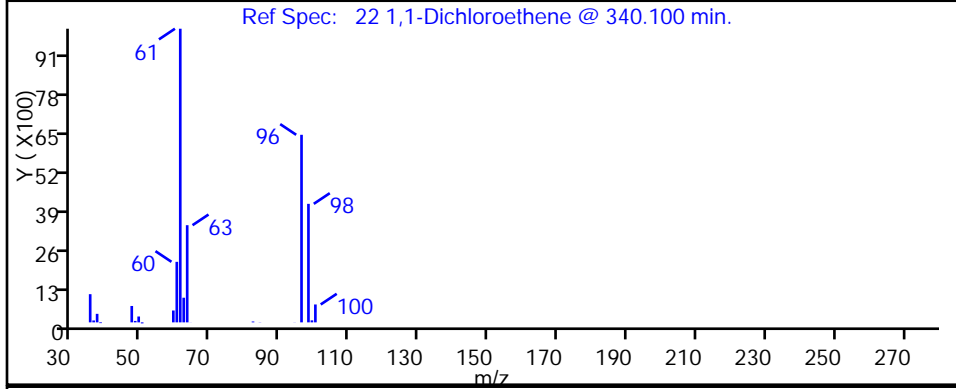
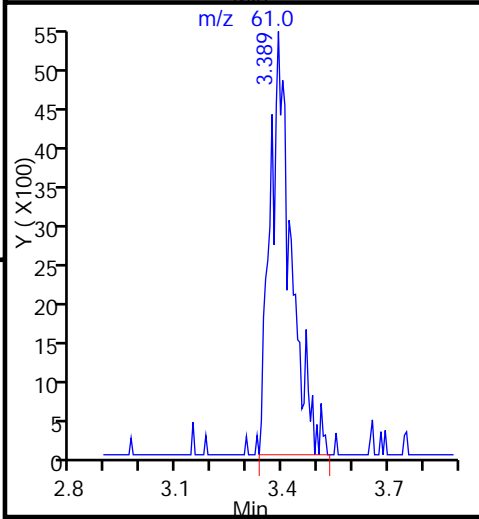
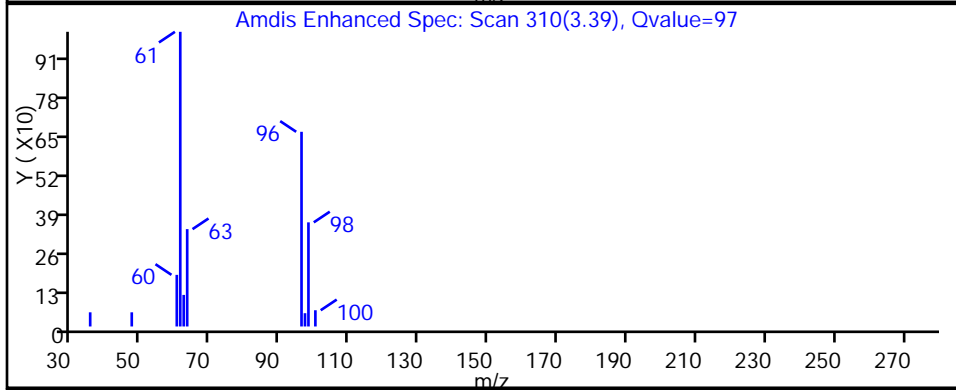
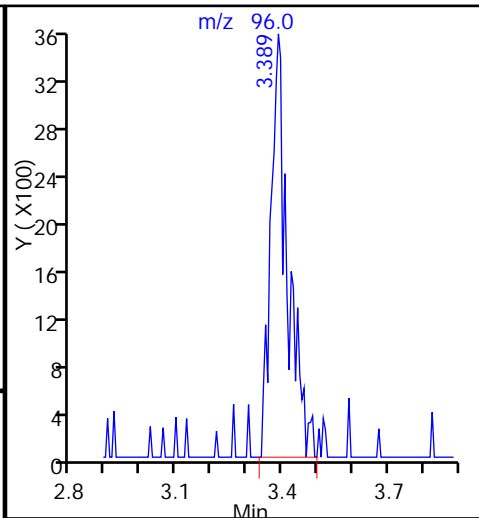
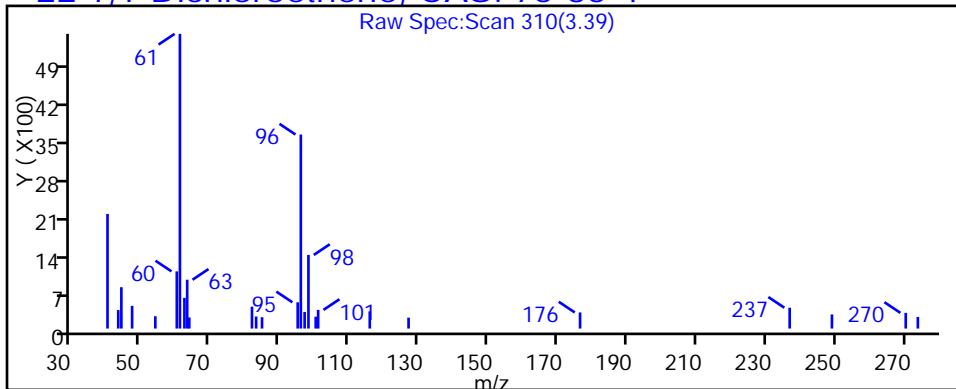
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D

Injection Date: 30-Jan-2015 16:10:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 20.0000

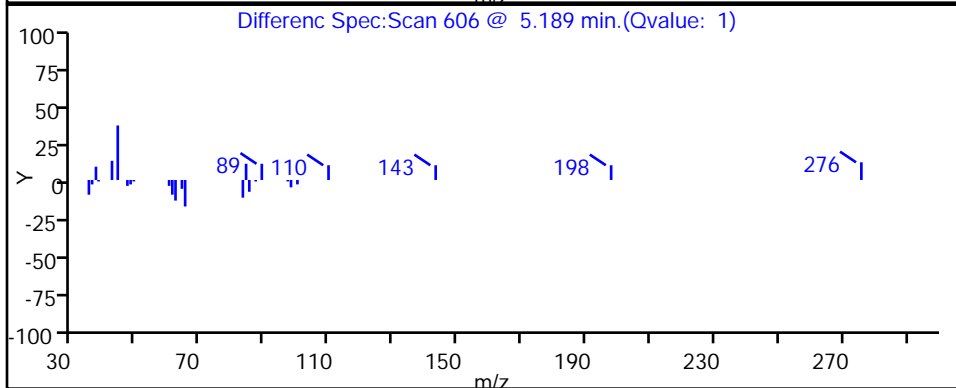
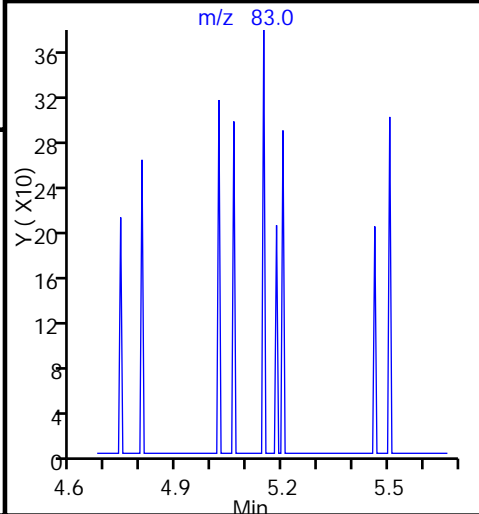
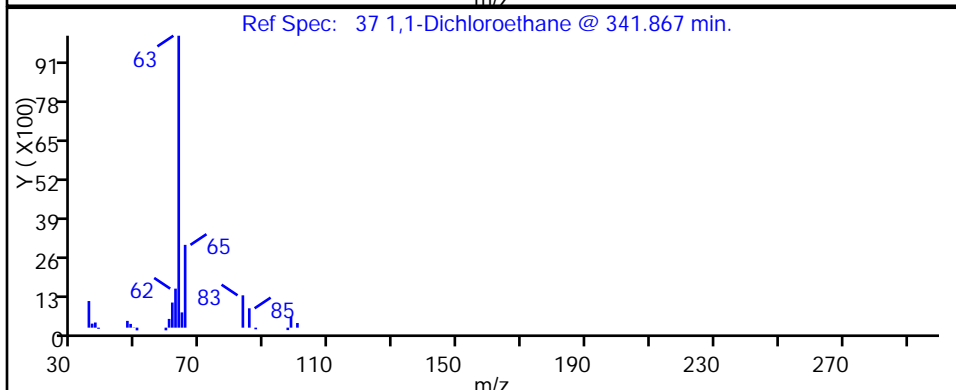
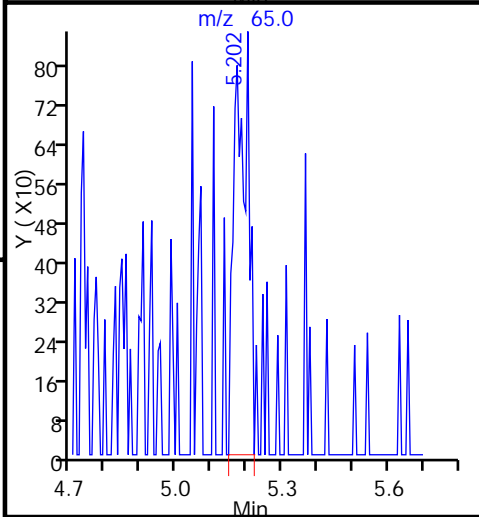
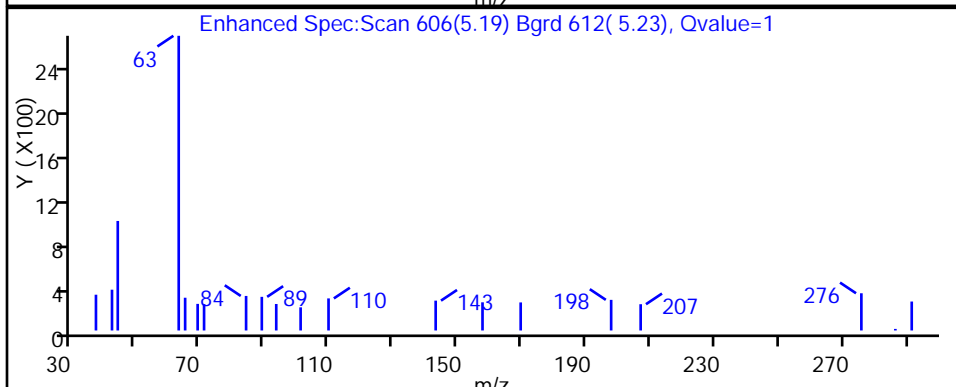
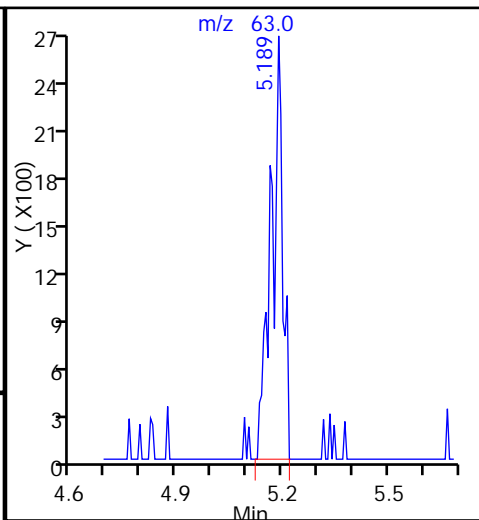
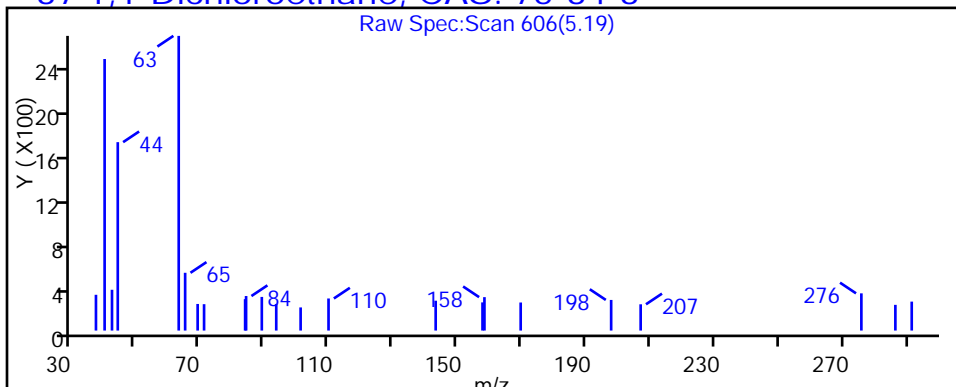
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D

Injection Date: 30-Jan-2015 16:10:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 20.0000

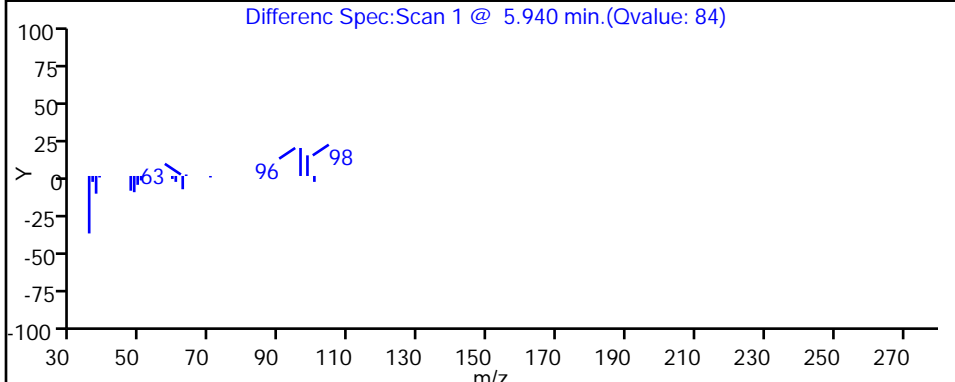
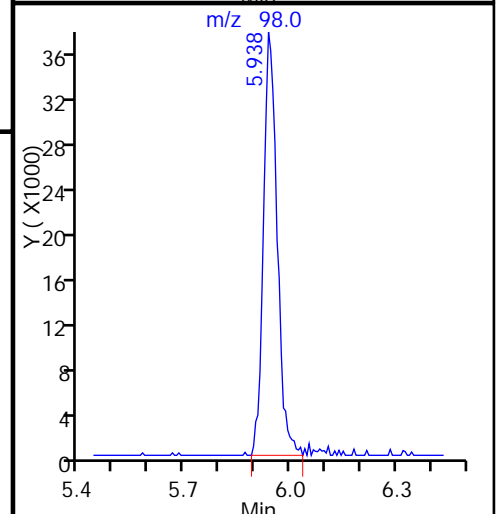
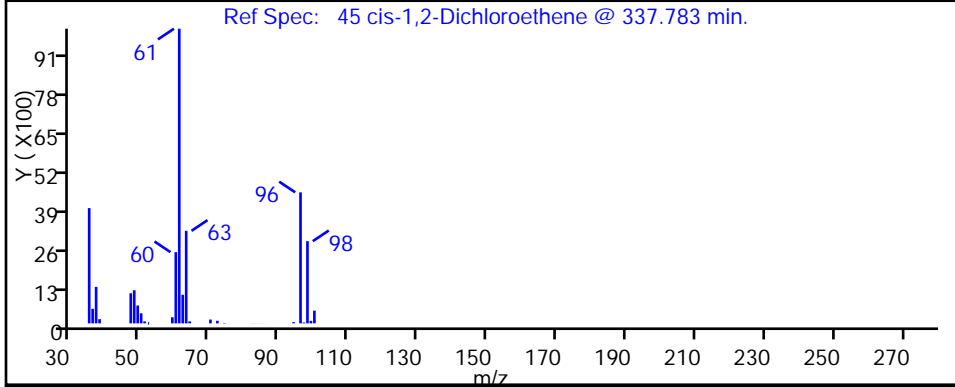
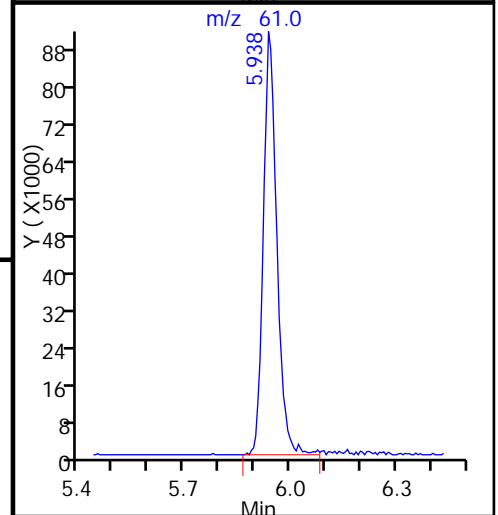
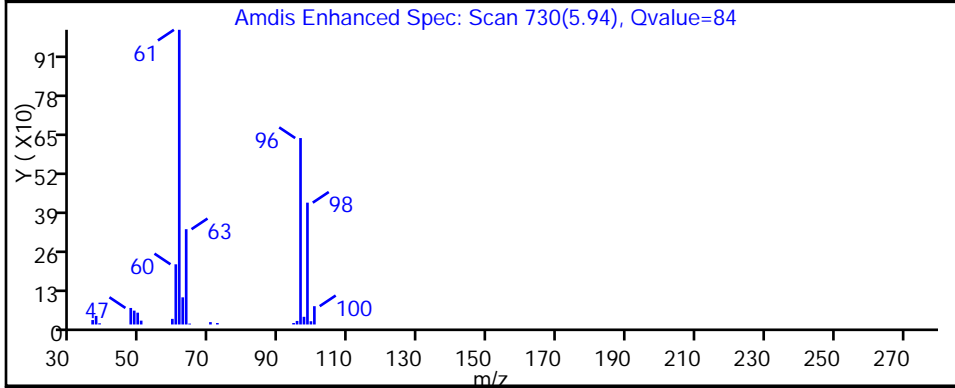
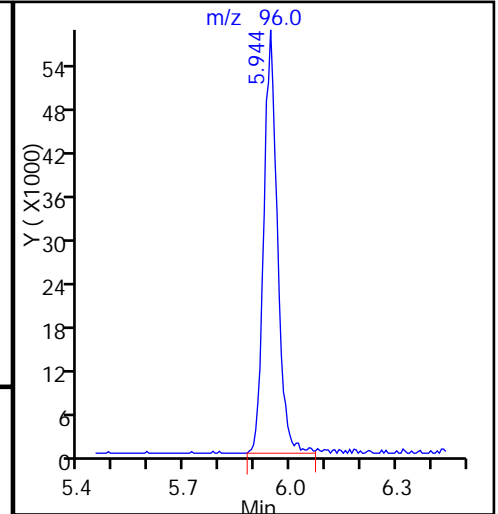
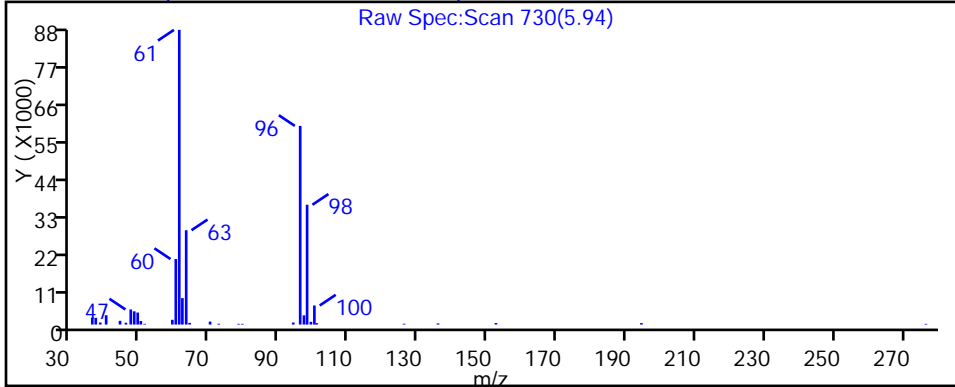
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D

Injection Date: 30-Jan-2015 16:10:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 20.0000

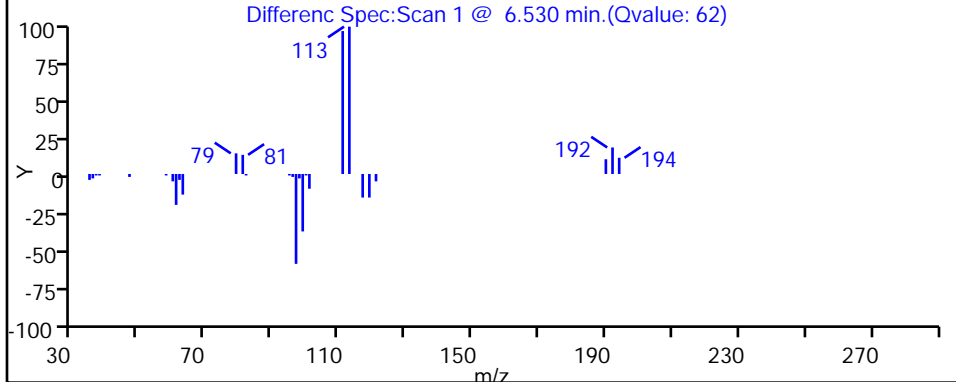
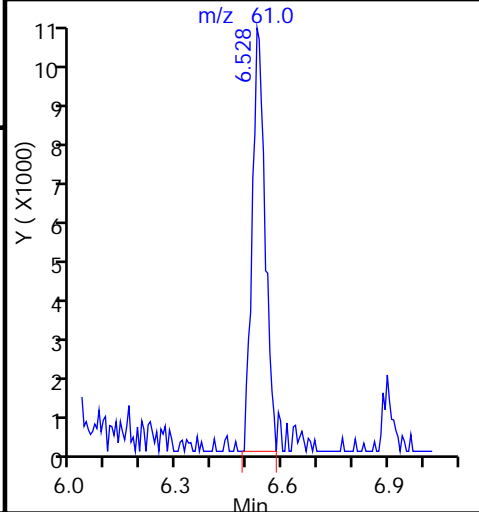
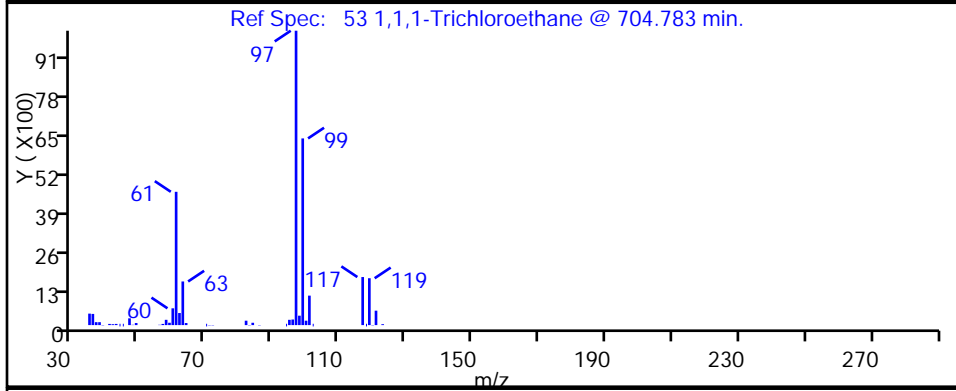
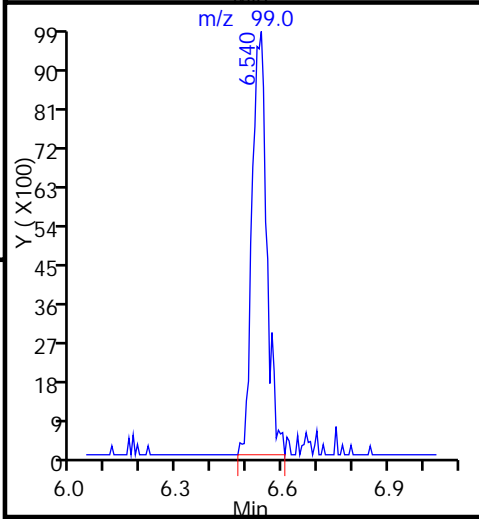
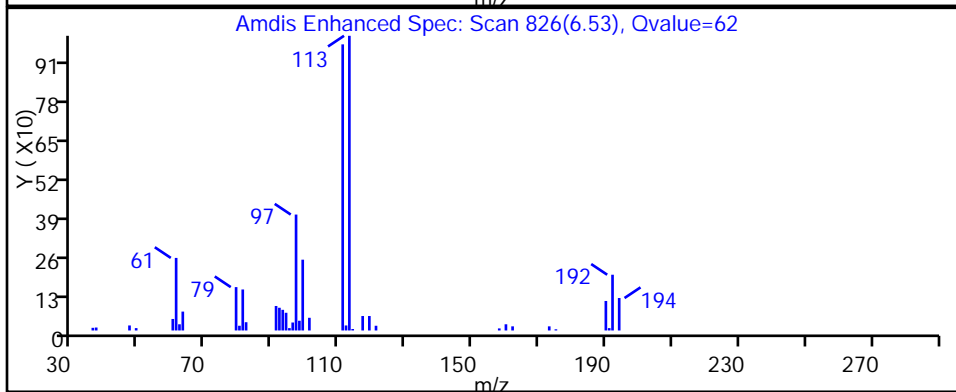
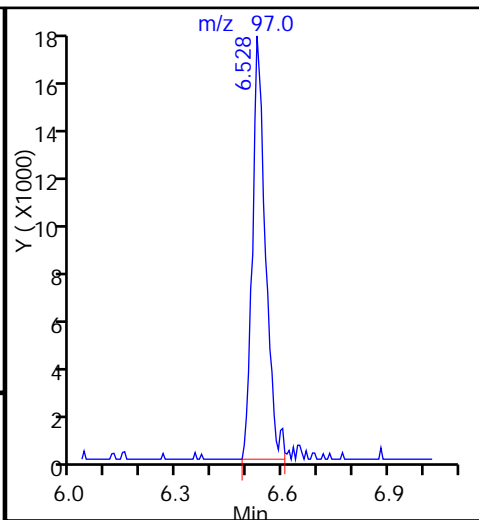
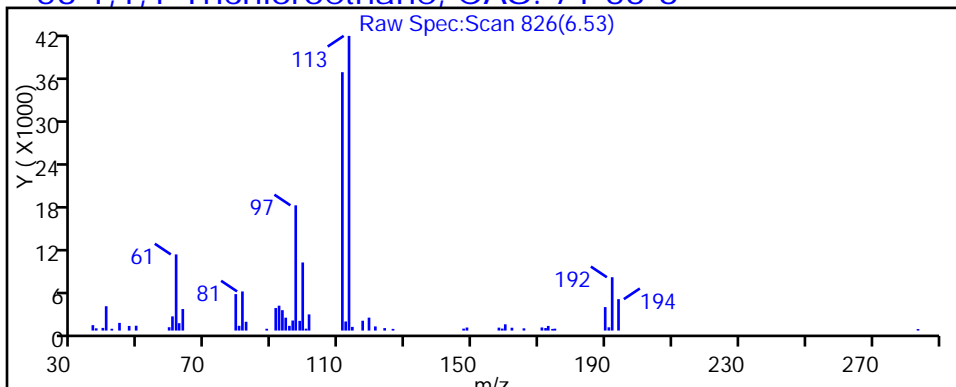
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D

Injection Date: 30-Jan-2015 16:10:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 20.0000

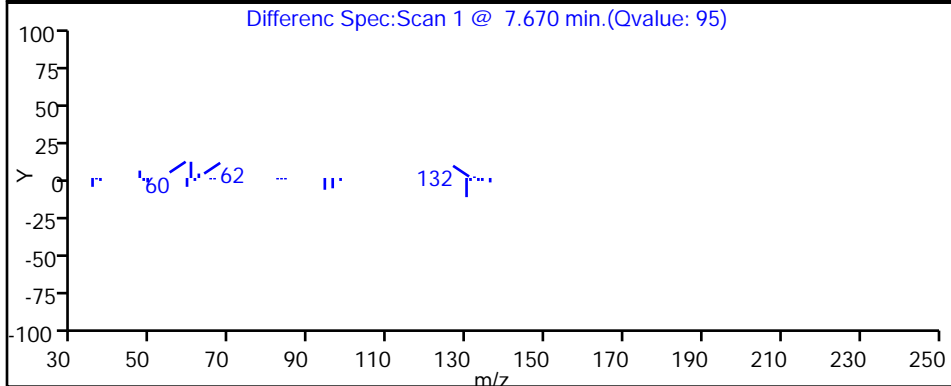
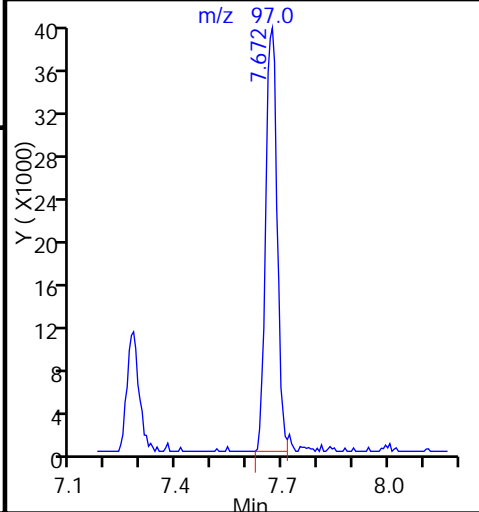
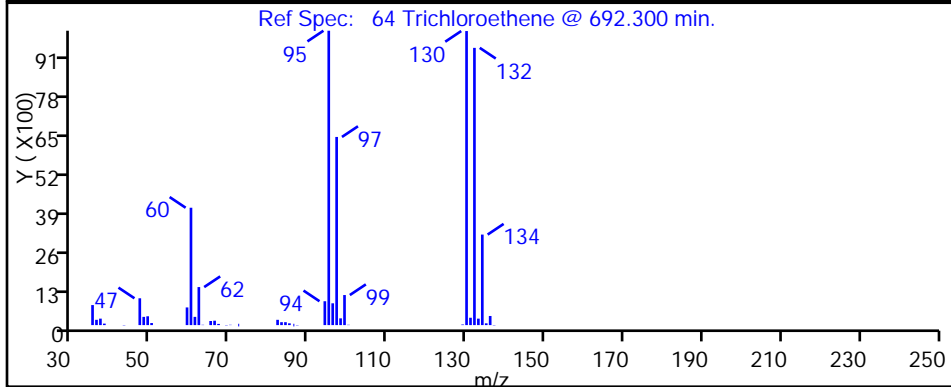
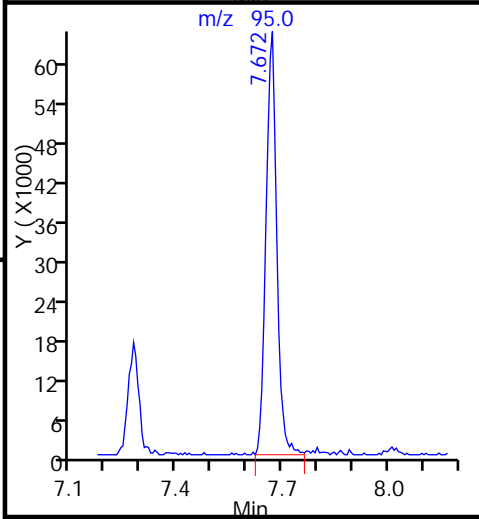
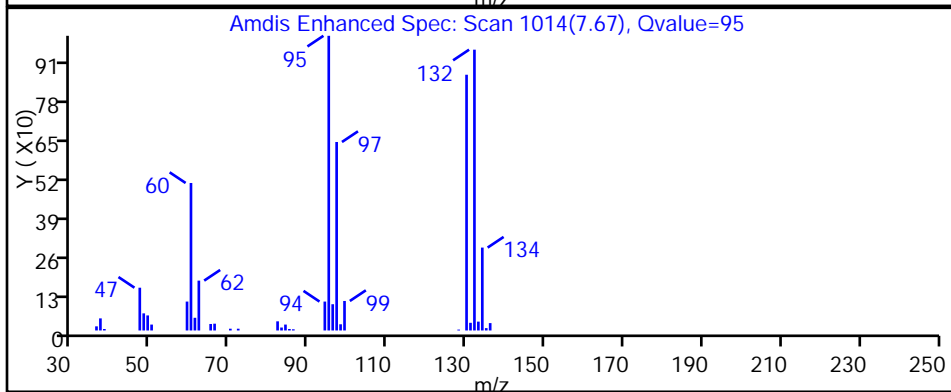
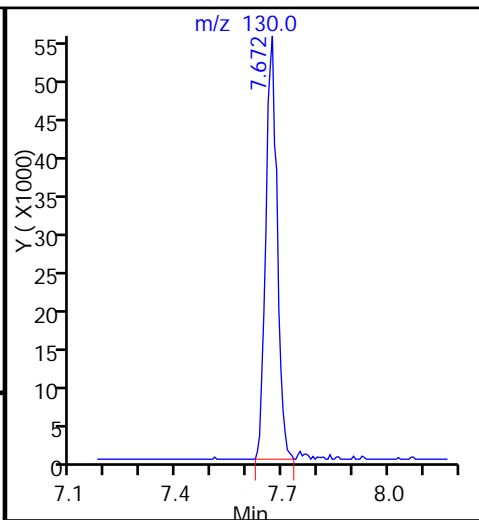
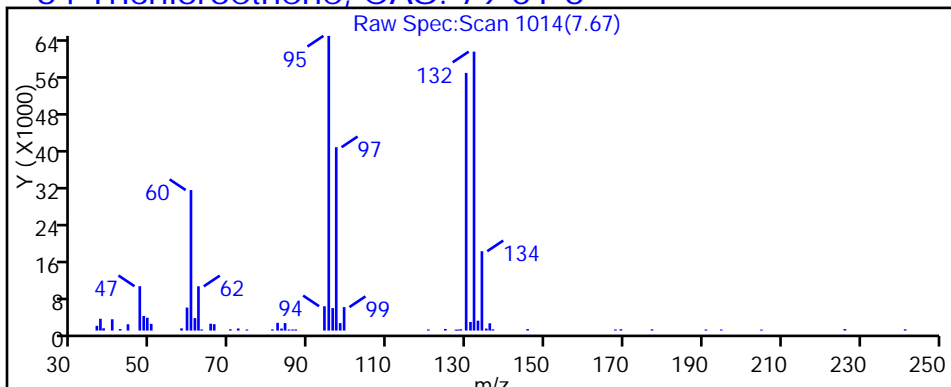
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6





TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130016.D

Injection Date: 30-Jan-2015 16:10:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-4

Lab Sample ID: 180-40617-4

Client ID: HD-CW-17-0/1-0

Operator ID: 001562

ALS Bottle#: 16

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 20.0000

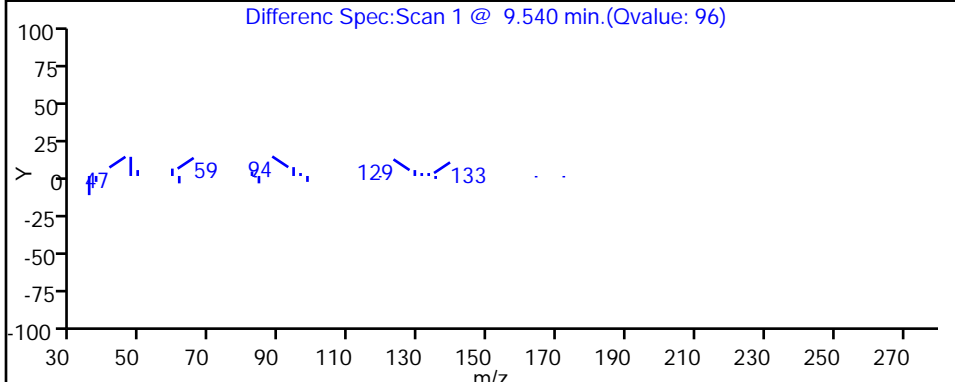
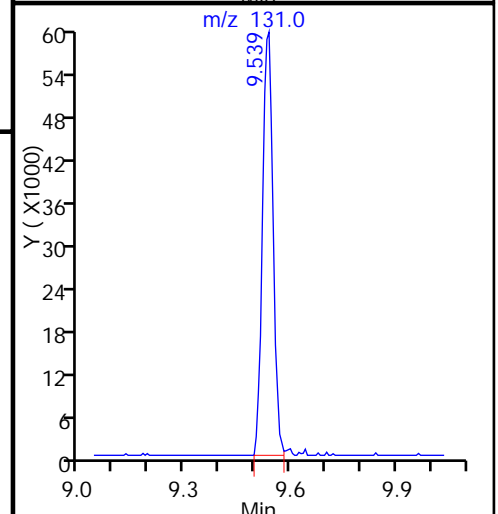
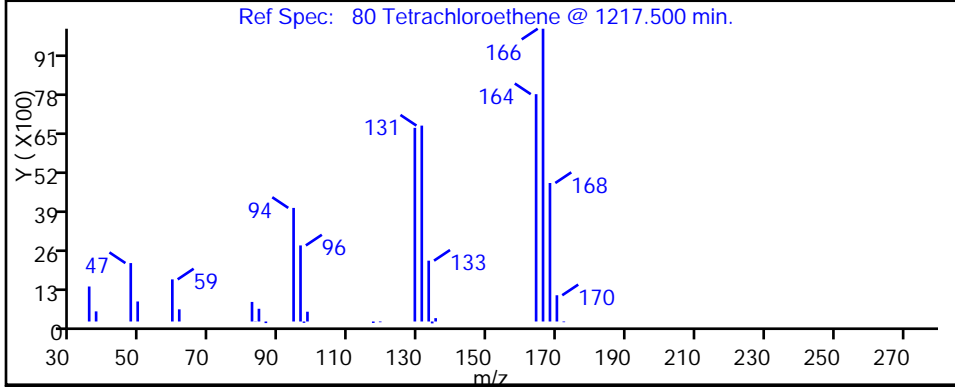
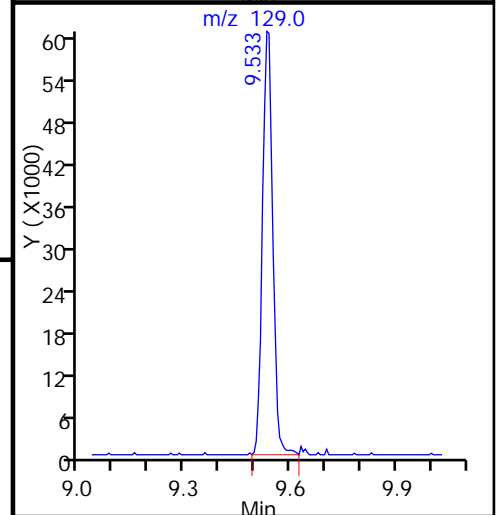
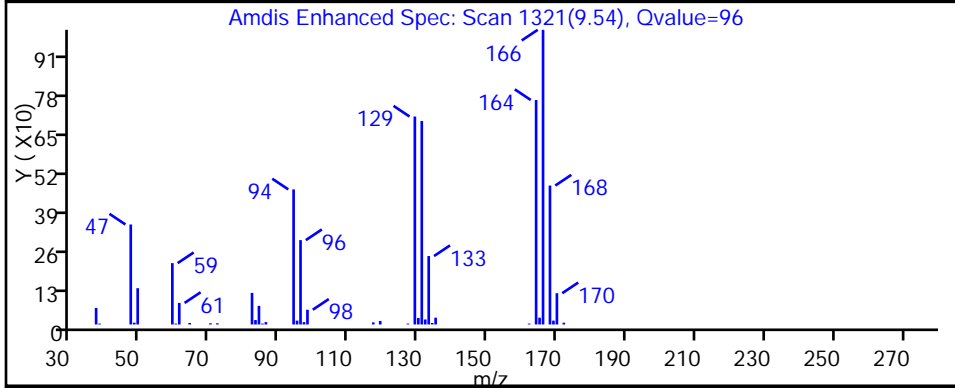
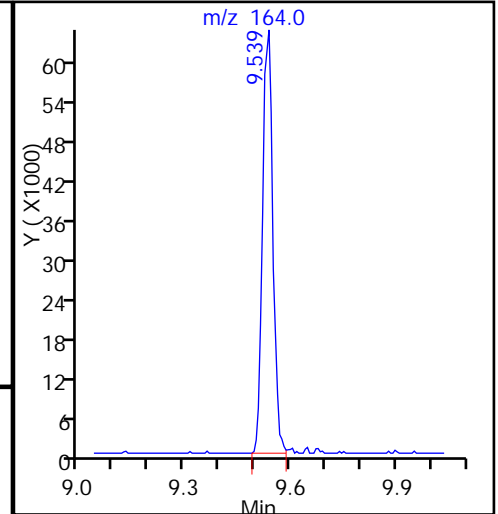
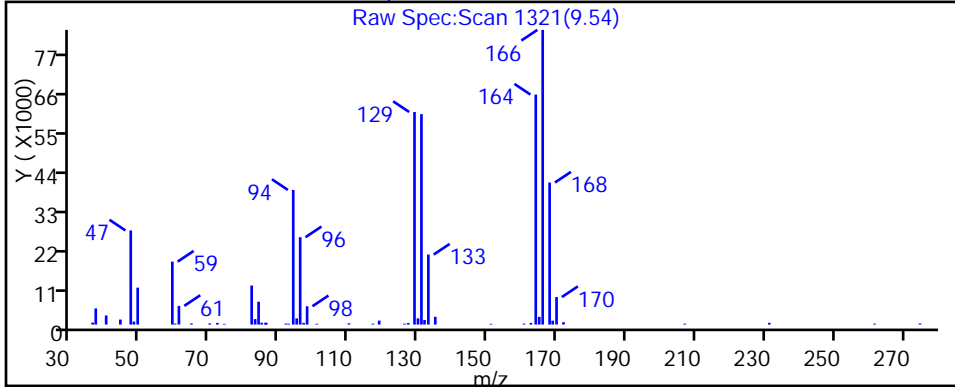
Method: MSVOA\_LL\_CHHP5

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-20-0/1-0 Lab Sample ID: 180-40617-5  
 Matrix: Water Lab File ID: 50128019.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:30  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 16:25  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 50  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	50	U	50	14
75-01-4	Vinyl chloride	50	U	50	11
74-83-9	Bromomethane	50	U	50	16
75-00-3	Chloroethane	50	U	50	11
75-35-4	1,1-Dichloroethene	47	J	50	15
67-64-1	Acetone	250	U	250	130
75-15-0	Carbon disulfide	50	U	50	11
75-09-2	Methylene Chloride	50	U	50	6.3
156-60-5	trans-1,2-Dichloroethene	50	U	50	8.5
1634-04-4	Methyl tert-butyl ether	50	U	50	9.2
75-34-3	1,1-Dichloroethane	36	J	50	5.8
156-59-2	cis-1,2-Dichloroethene	510		50	12
74-97-5	Bromochloromethane	50	U	50	9.0
78-93-3	2-Butanone (MEK)	250	U	250	27
67-66-3	Chloroform	50	U	50	8.5
71-55-6	1,1,1-Trichloroethane	240		50	14
56-23-5	Carbon tetrachloride	50	U	50	6.8
71-43-2	Benzene	50	U	50	5.3
107-06-2	1,2-Dichloroethane	50	U	50	11
79-01-6	Trichloroethene	600		50	7.2
78-87-5	1,2-Dichloropropane	50	U	50	4.7
75-27-4	Bromodichloromethane	50	U	50	6.5
10061-01-5	cis-1,3-Dichloropropene	50	U	50	9.3
108-10-1	4-Methyl-2-pentanone (MIBK)	250	U	250	26
108-88-3	Toluene	50	U	50	7.5
10061-02-6	trans-1,3-Dichloropropene	50	U	50	7.4
79-00-5	1,1,2-Trichloroethane	50	U	50	10
127-18-4	Tetrachloroethene	360		50	7.4
591-78-6	2-Hexanone	250	U	250	8.0
124-48-1	Dibromochloromethane	50	U	50	6.8
106-93-4	1,2-Dibromoethane (EDB)	50	U	50	9.0
108-90-7	Chlorobenzene	50	U	50	6.8
630-20-6	1,1,1,2-Tetrachloroethane	50	U	50	14
100-41-4	Ethylbenzene	50	U	50	11
1330-20-7	Xylenes, Total	150	U	150	24
100-42-5	Styrene	50	U	50	4.8

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-20-0/1-0 Lab Sample ID: 180-40617-5  
 Matrix: Water Lab File ID: 50128019.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 07:30  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 16:25  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 50  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-624 ID: 0.18 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	50	U	50	9.6
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	10
107-13-1	Acrylonitrile	1000	U	1000	27
123-91-1	1,4-Dioxane	10000	U	10000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		64-135
2037-26-5	Toluene-d8 (Surr)	94		71-118
460-00-4	4-Bromofluorobenzene (Surr)	94		70-118
1868-53-7	Dibromofluoromethane (Surr)	116		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D  
 Lims ID: 180-40617-E-5 Lab Sample ID: 180-40617-5  
 Client ID: HD-CW-20-0/1-0  
 Sample Type: Client  
 Inject. Date: 28-Jan-2015 16:25:30 ALS Bottle#: 18 Worklist Smp#: 19  
 Purge Vol: 5.000 mL Dil. Factor: 50.0000  
 Sample Info: 180-40617-E-5, 50x  
 Misc. Info.: 180-0005445-019  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 29-Jan-2015 07:50:35 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK022

First Level Reviewer: fergusond

Date: 29-Jan-2015 07:50:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.308	-0.012	89	144842	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.276	0.001	99	400978	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	98	92337	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	99	128024	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.535	6.534	0.001	92	99415	58.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.899	0.007	93	133747	47.7	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	96	359278	46.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.535	-0.006	82	138016	47.2	
12 Chloromethane	50		1.783				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.416				ND	
22 1,1-Dichloroethene	96	3.390	3.383	0.007	60	10165	4.65	
24 Acetone	43		3.499				ND	
26 Carbon disulfide	76		3.675				ND	
31 Methylene Chloride	84		4.156				ND	
33 Acrylonitrile	53		4.557				ND	
34 trans-1,2-Dichloroethene	96		4.563				ND	
35 Methyl tert-butyl ether	73		4.588				ND	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	96	18446	3.59	
45 cis-1,2-Dichloroethene	96	5.951	5.938	0.013	82	122197	51.1	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.224				ND	
52 Chloroform	83		6.352				ND	
53 1,1,1-Trichloroethane	97	6.535	6.534	0.001	69	60097	23.8	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.990				ND	
64 Trichloroethene	130	7.672	7.666	0.006	96	128346	60.5	
67 1,2-Dichloropropane	63		7.903				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.657				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.223				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164	9.534	9.539	-0.005	94	64976	35.9	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.904				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.476				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.622				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.218				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D

Injection Date: 28-Jan-2015 16:25:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-E-5

Lab Sample ID: 180-40617-5

Worklist Smp#: 19

Client ID: HD-CW-20-0/1-0

Purge Vol: 5.000 mL

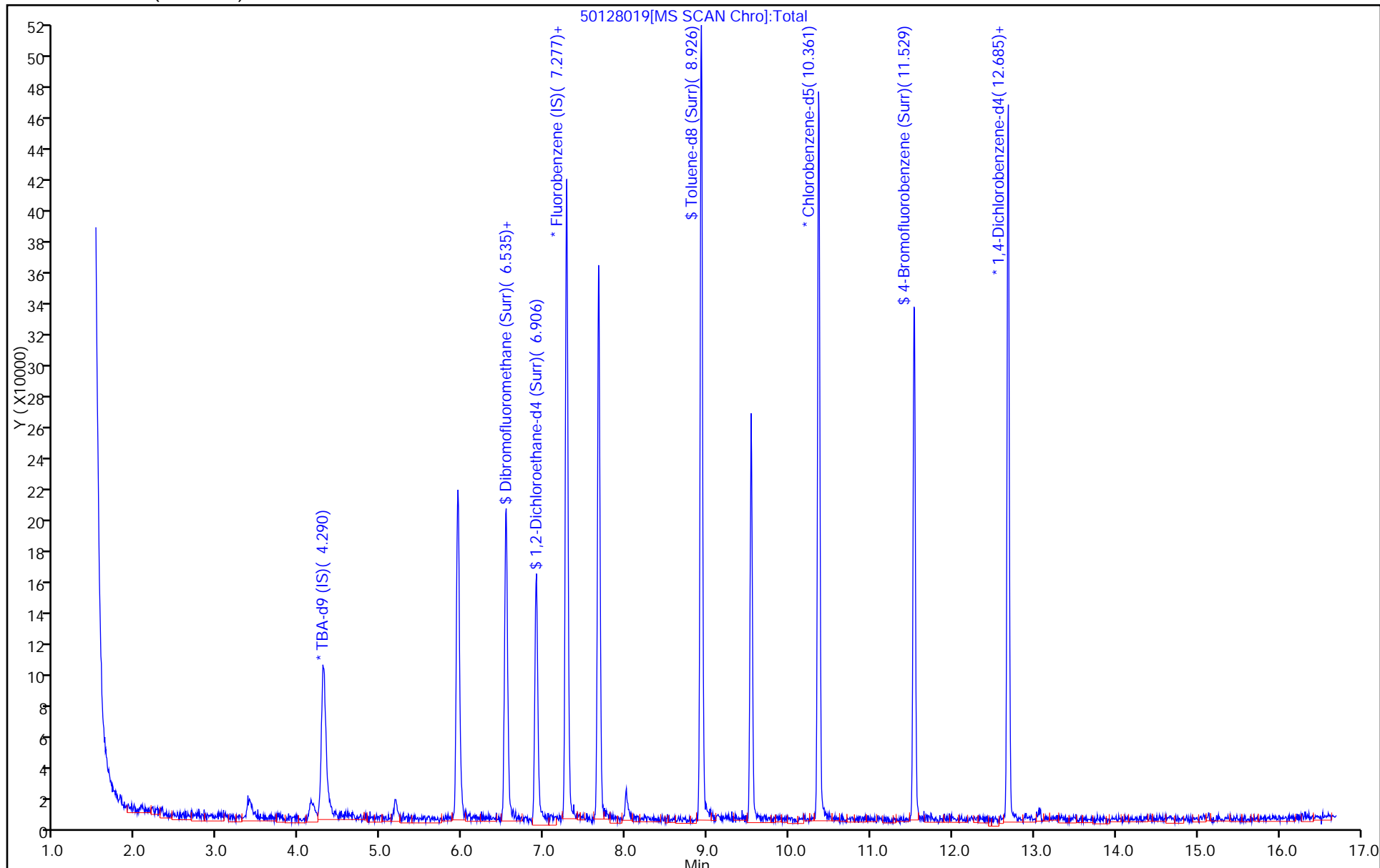
Dil. Factor: 50.0000

ALS Bottle#: 18

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D

Injection Date: 28-Jan-2015 16:25:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-5

Lab Sample ID: 180-40617-5

Client ID: HD-CW-20-0/1-0

Operator ID: 001562

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

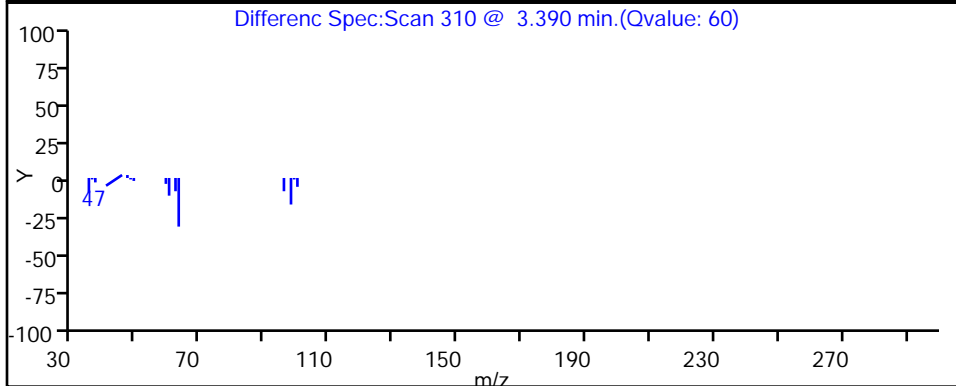
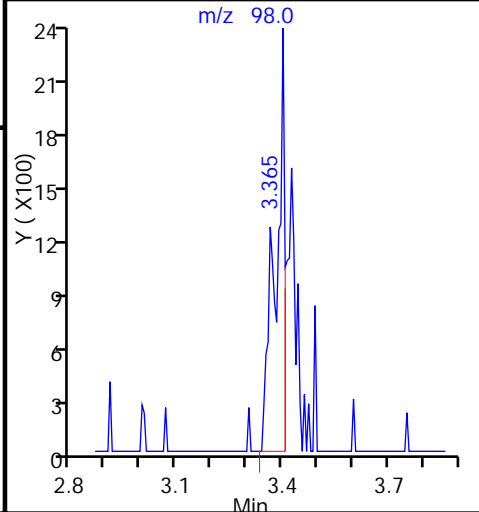
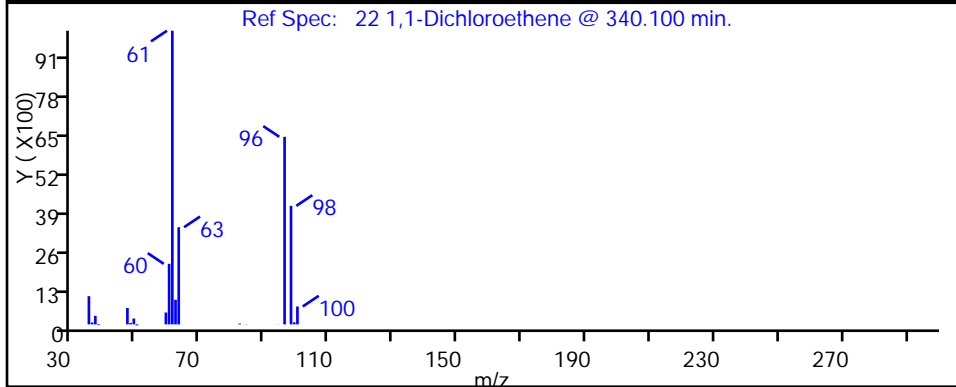
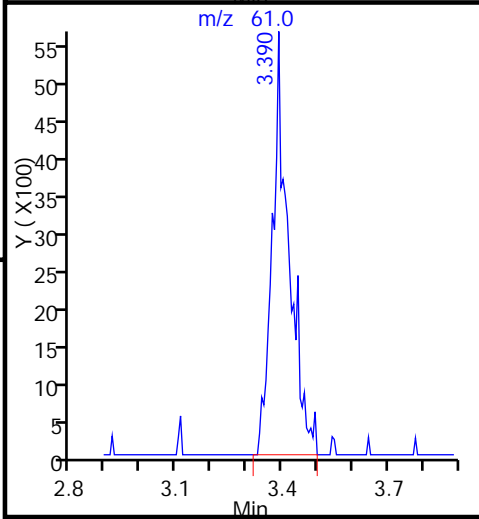
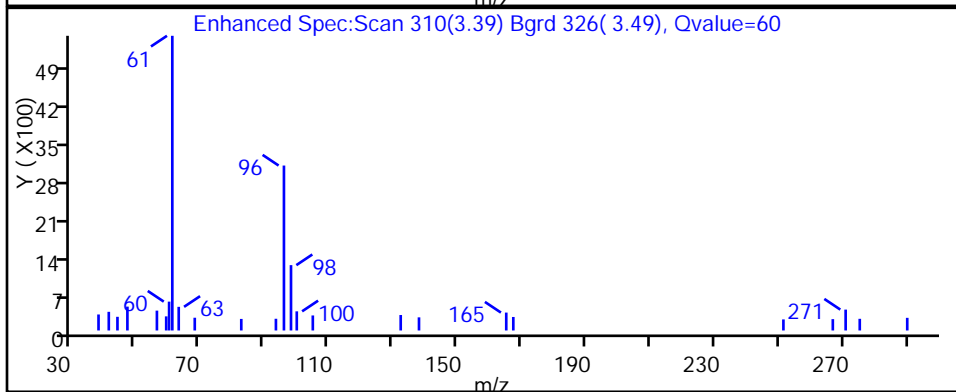
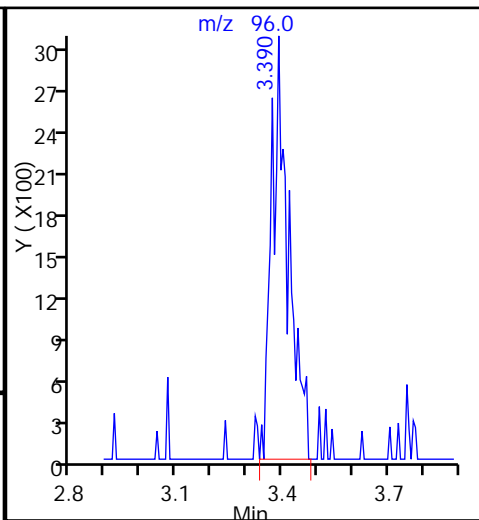
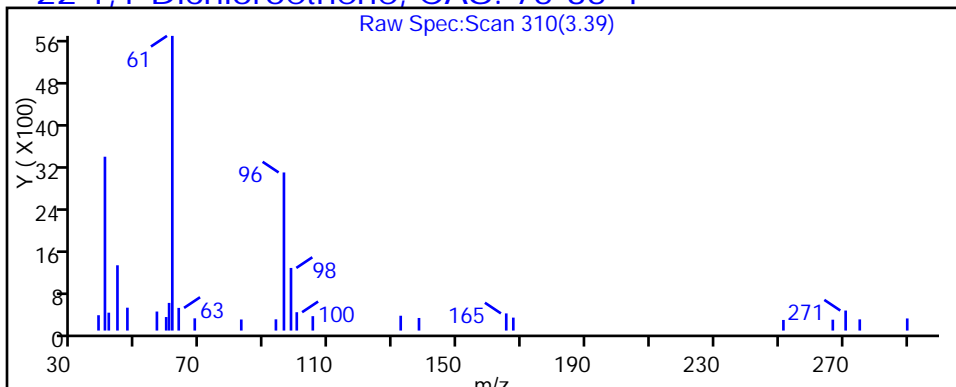
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D

Injection Date: 28-Jan-2015 16:25:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-5

Lab Sample ID: 180-40617-5

Client ID: HD-CW-20-0/1-0

Operator ID: 001562

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

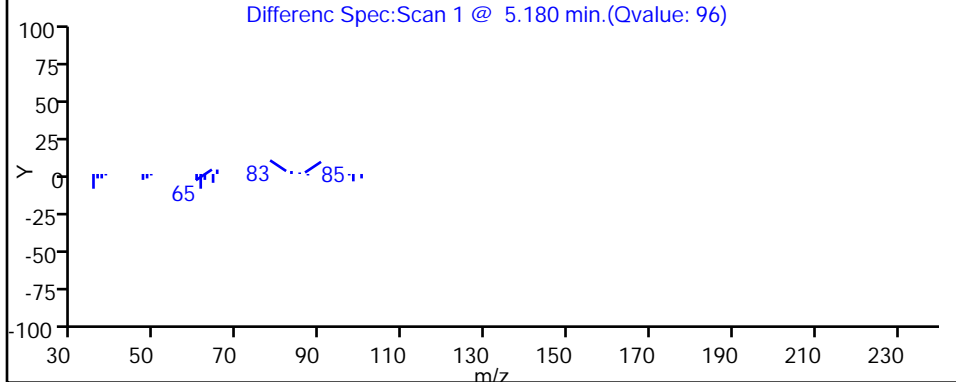
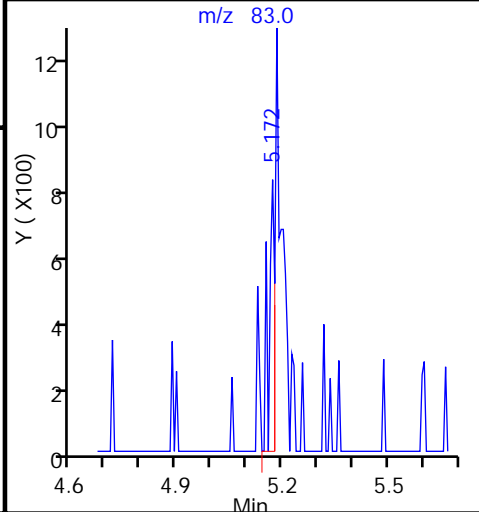
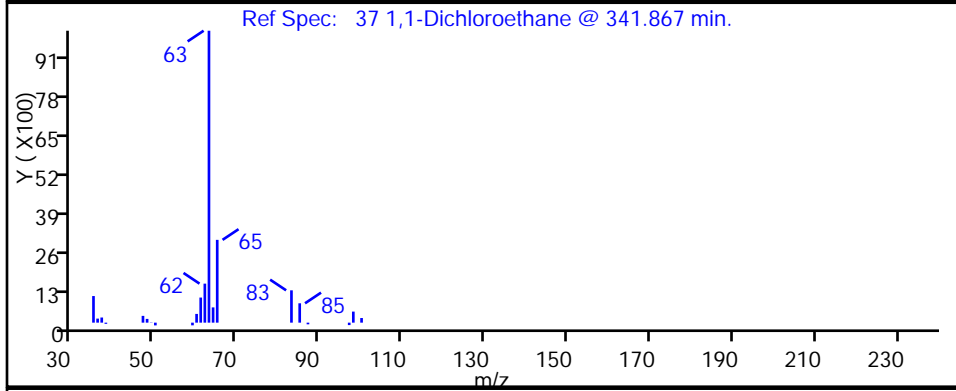
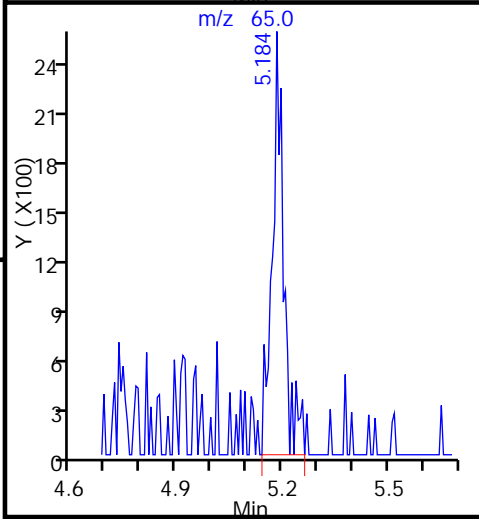
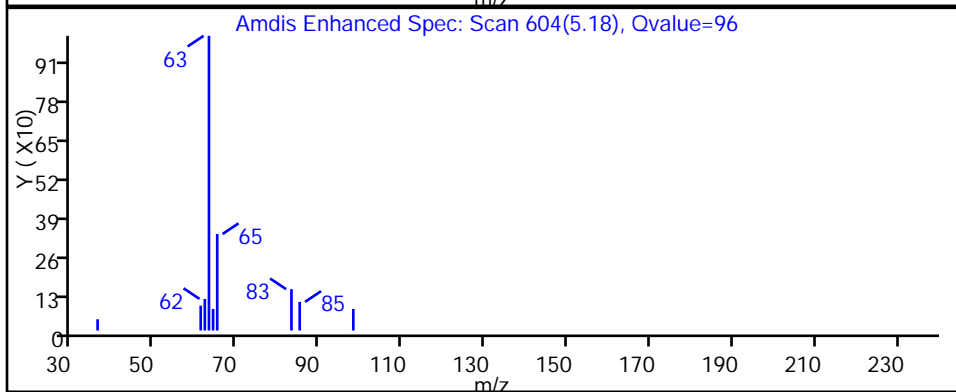
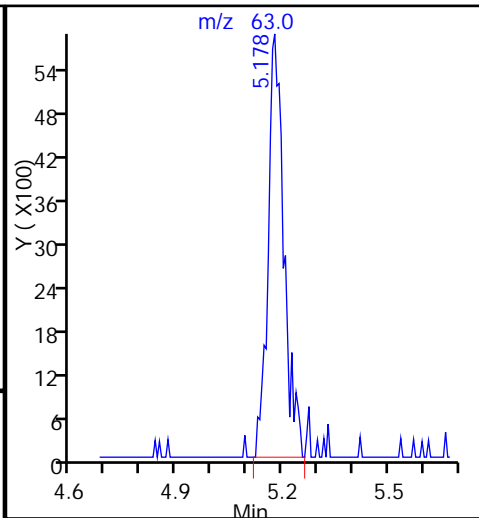
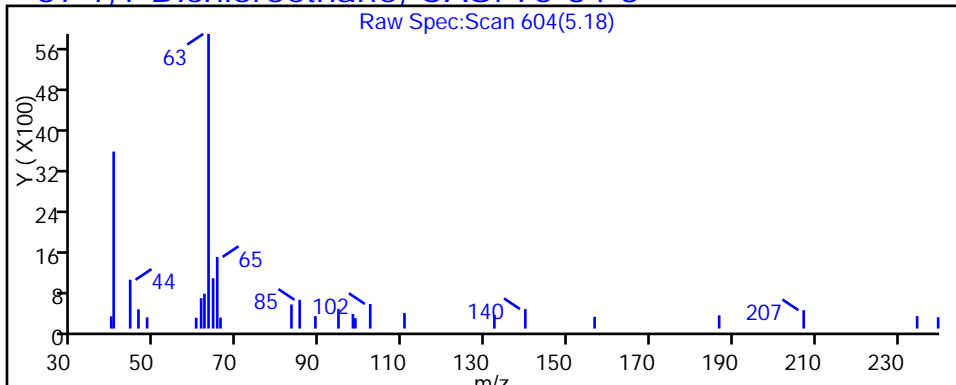
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D

Injection Date: 28-Jan-2015 16:25:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-5

Lab Sample ID: 180-40617-5

Client ID: HD-CW-20-0/1-0

Operator ID: 001562

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

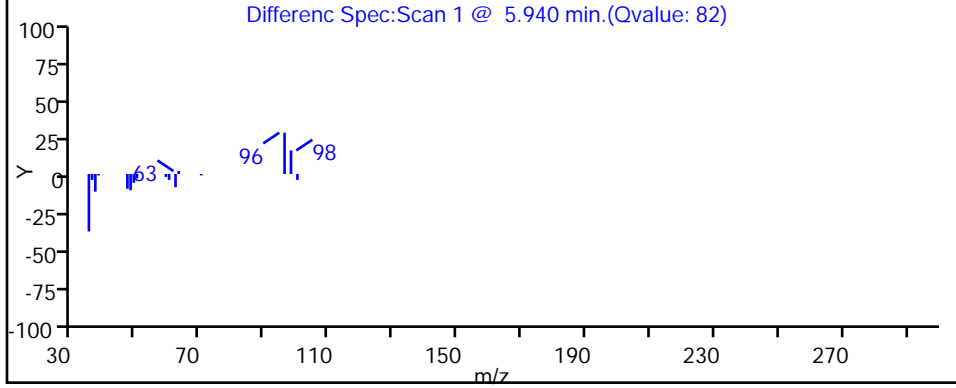
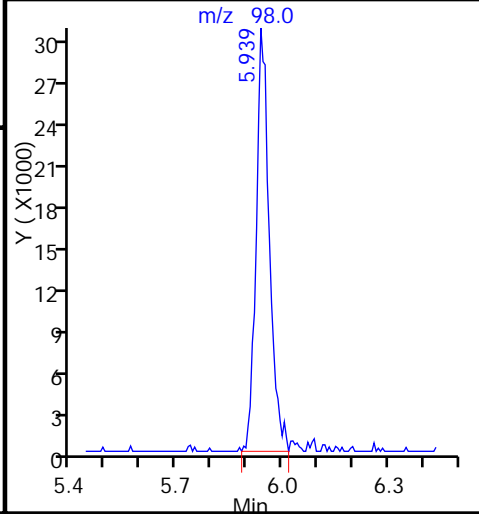
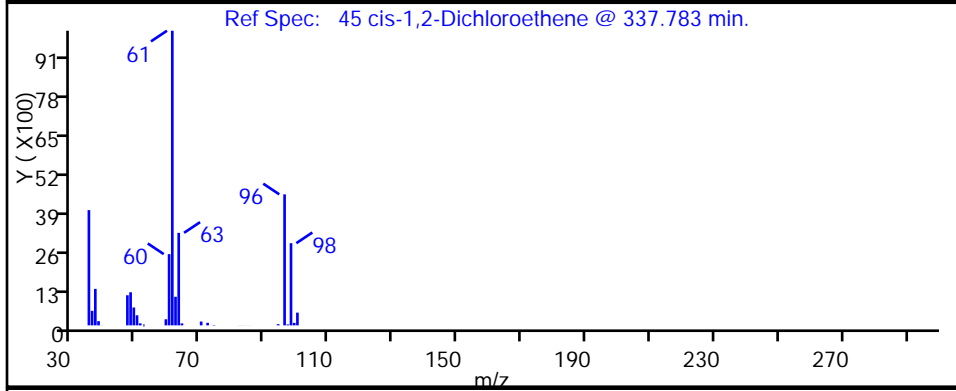
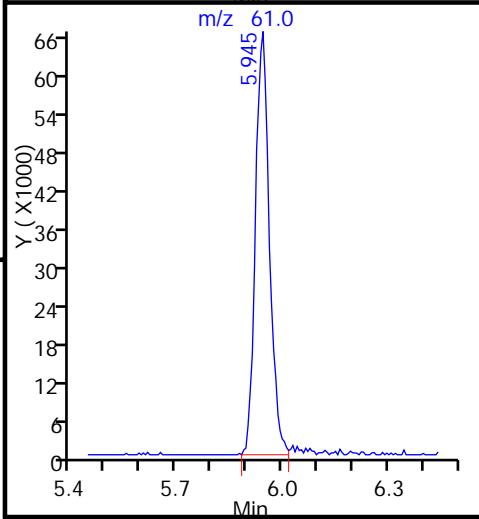
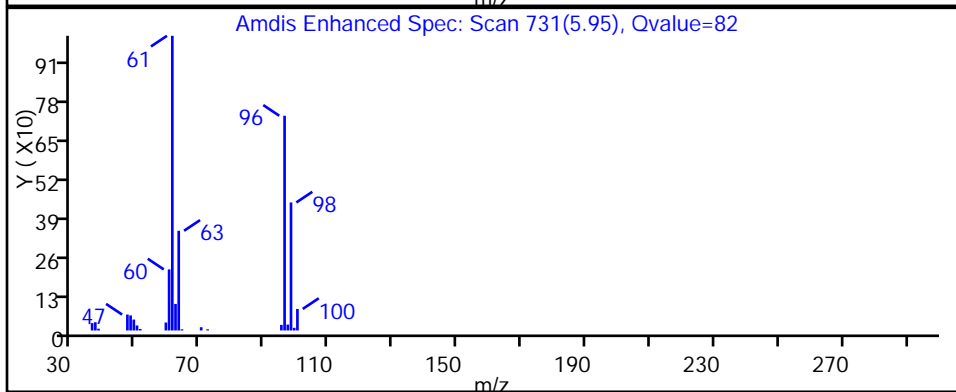
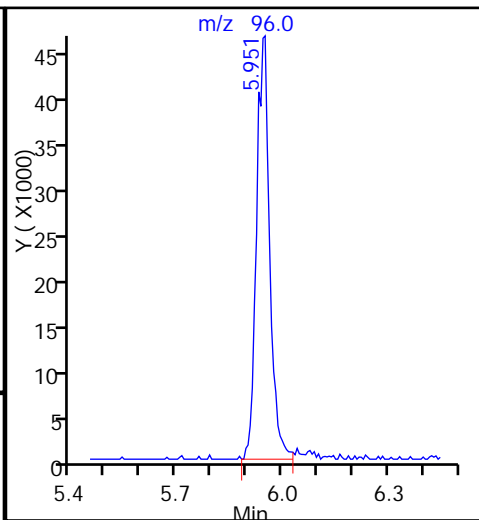
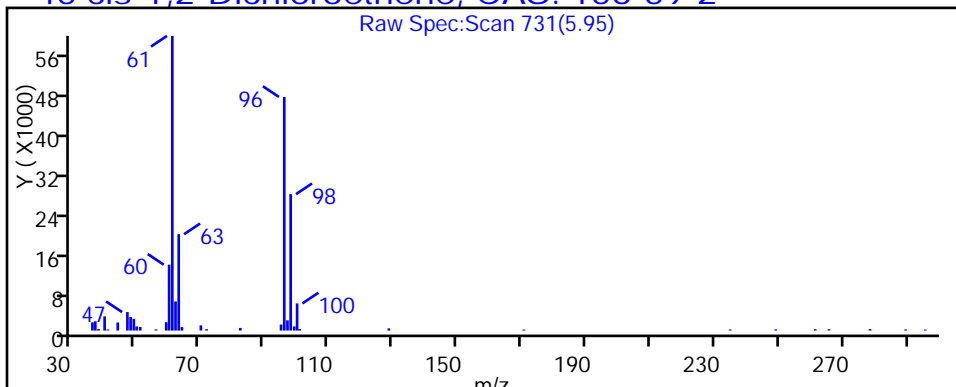
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D

Injection Date: 28-Jan-2015 16:25:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-5

Lab Sample ID: 180-40617-5

Client ID: HD-CW-20-0/1-0

Operator ID: 001562

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

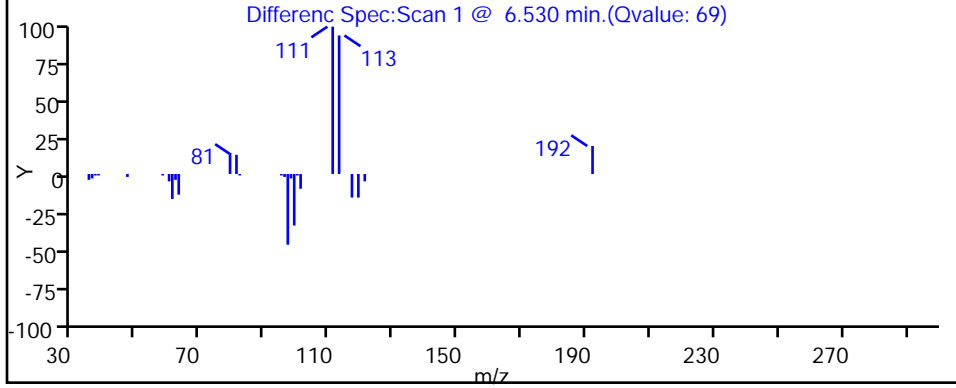
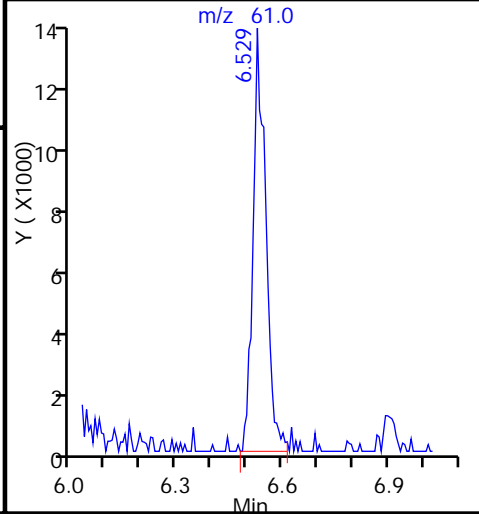
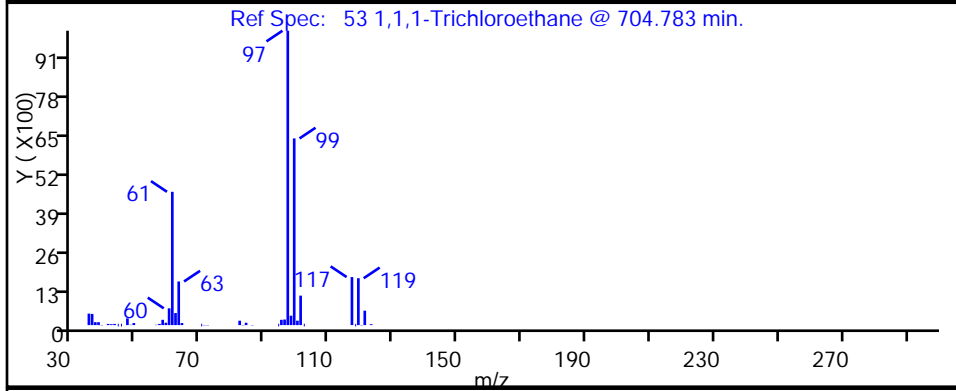
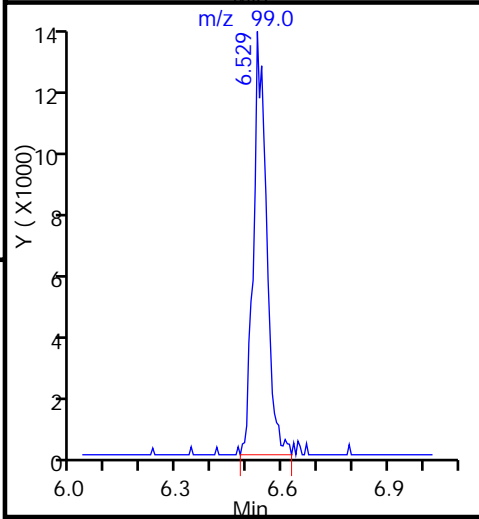
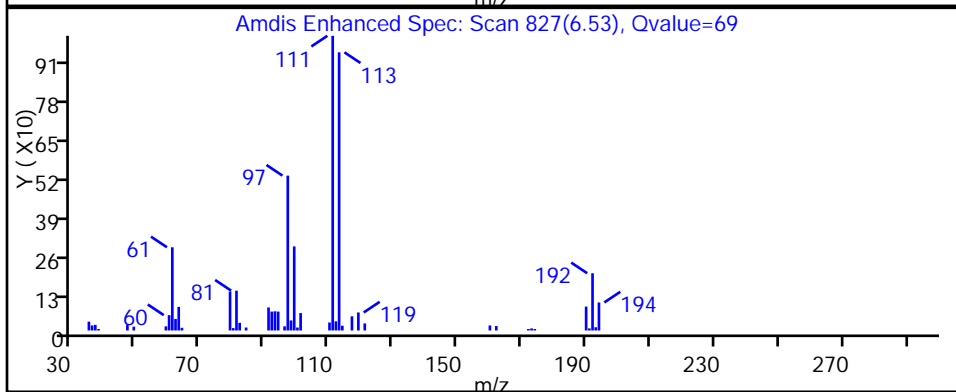
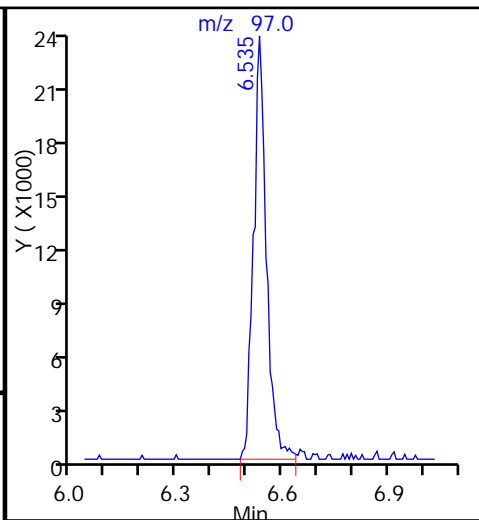
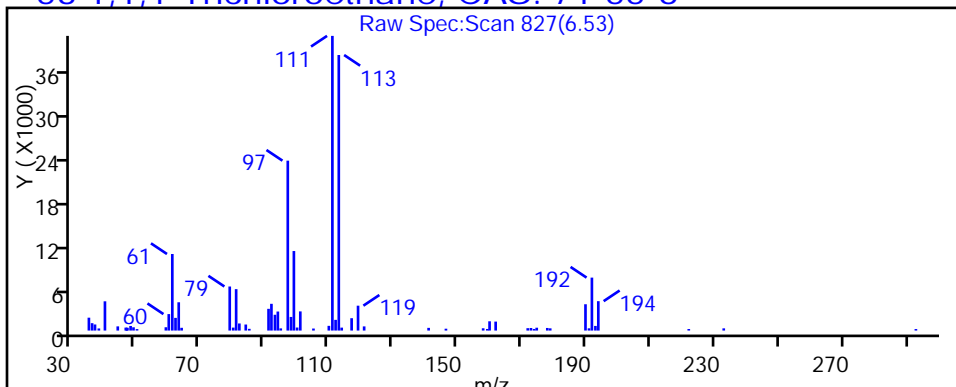
Method: MSVOA\_LL\_CHHP5

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D

Injection Date: 28-Jan-2015 16:25:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-5

Lab Sample ID: 180-40617-5

Client ID: HD-CW-20-0/1-0

Operator ID: 001562

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

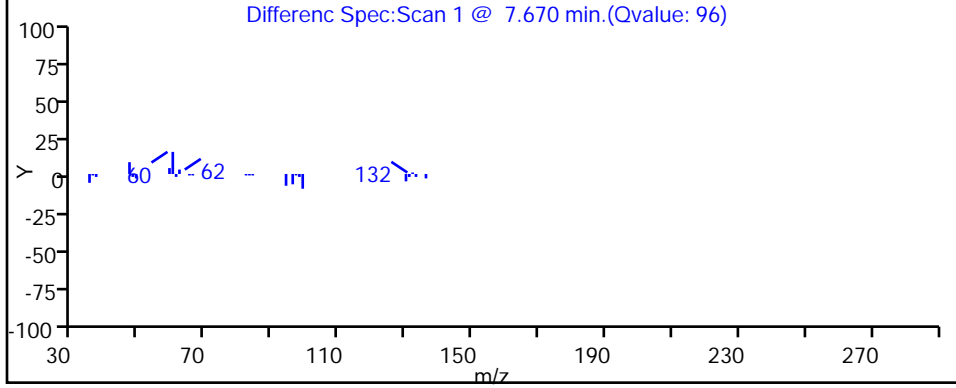
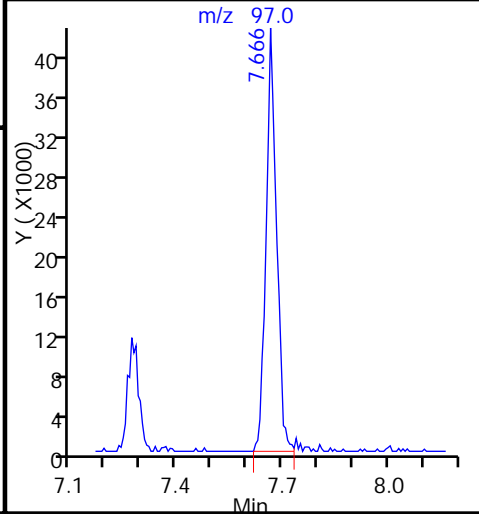
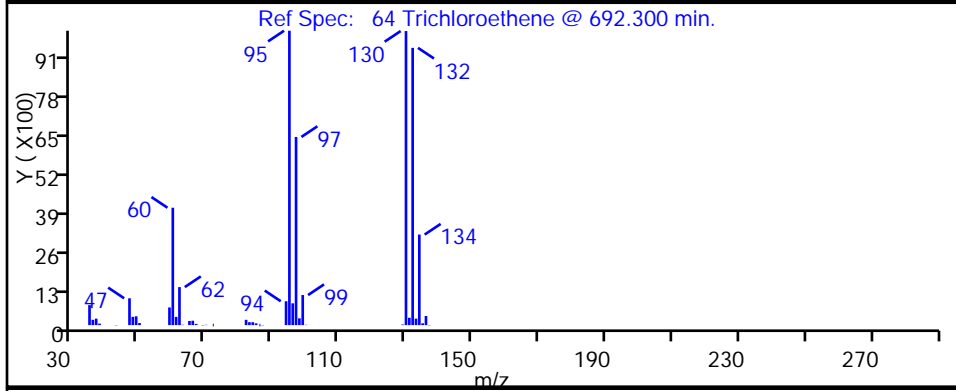
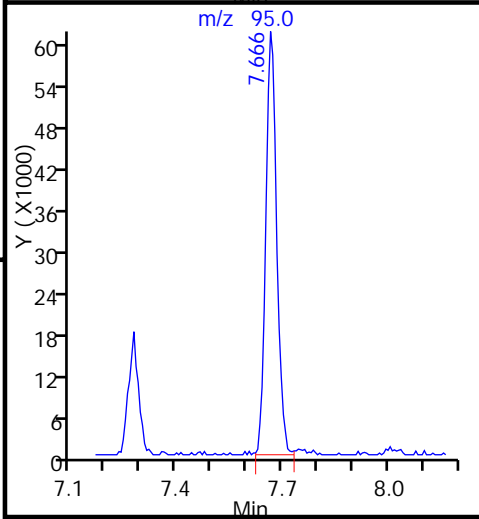
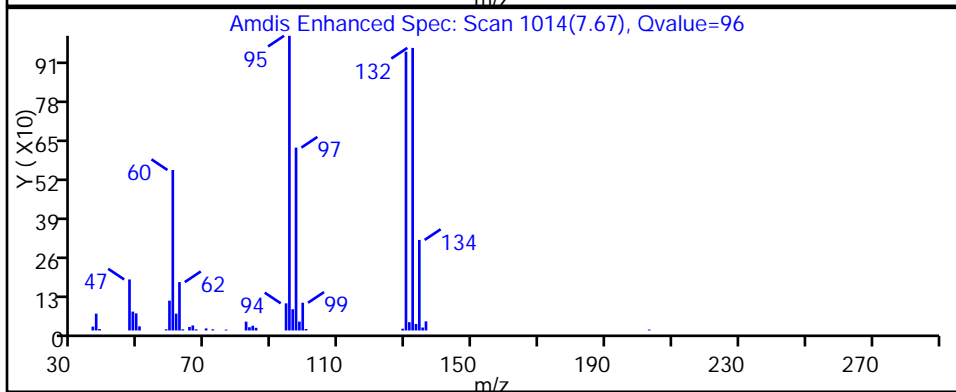
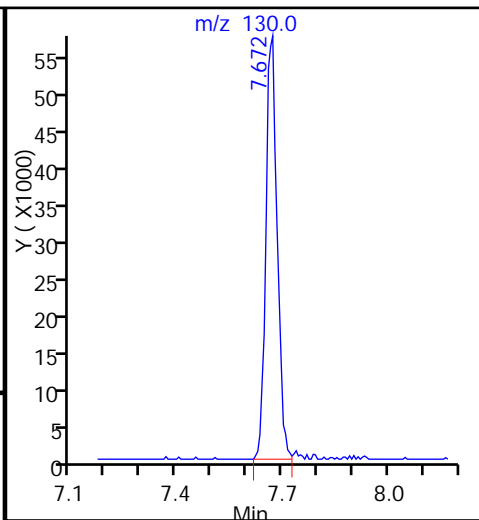
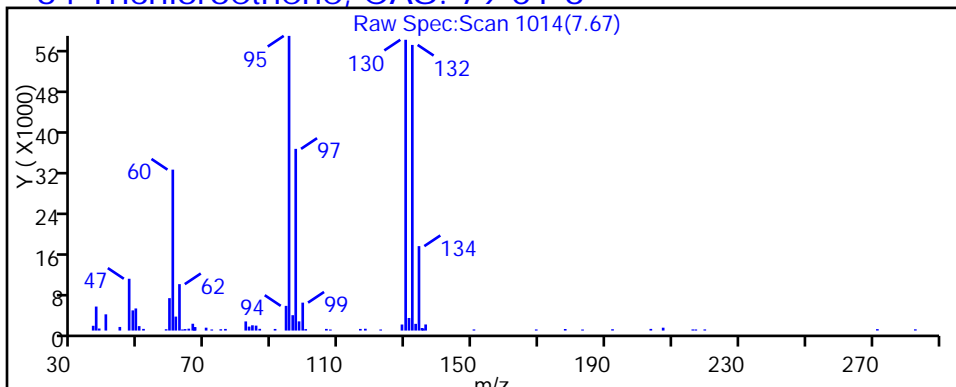
Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128019.D

Injection Date: 28-Jan-2015 16:25:30

Instrument ID: CHHP5

Lims ID: 180-40617-E-5

Lab Sample ID: 180-40617-5

Client ID: HD-CW-20-0/1-0

Operator ID: 001562

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 5.000 mL

Dil. Factor: 50.0000

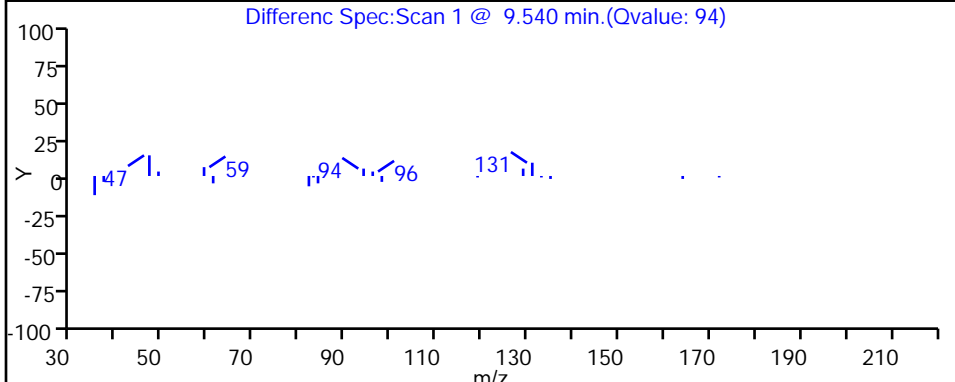
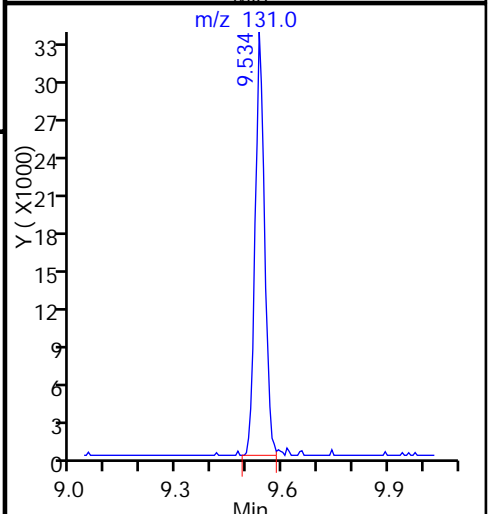
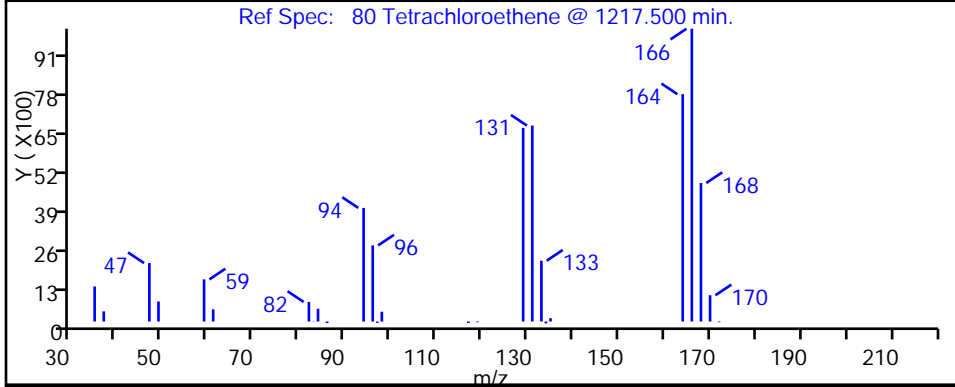
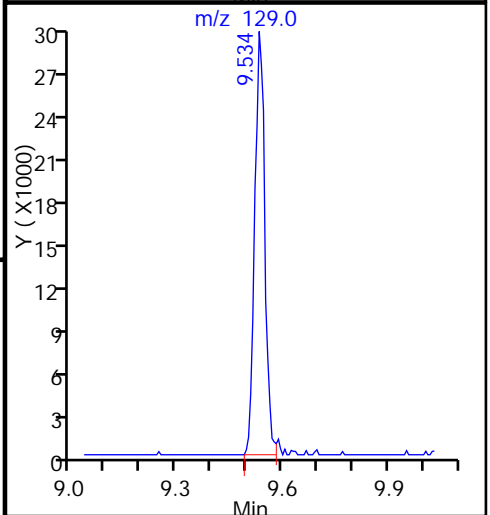
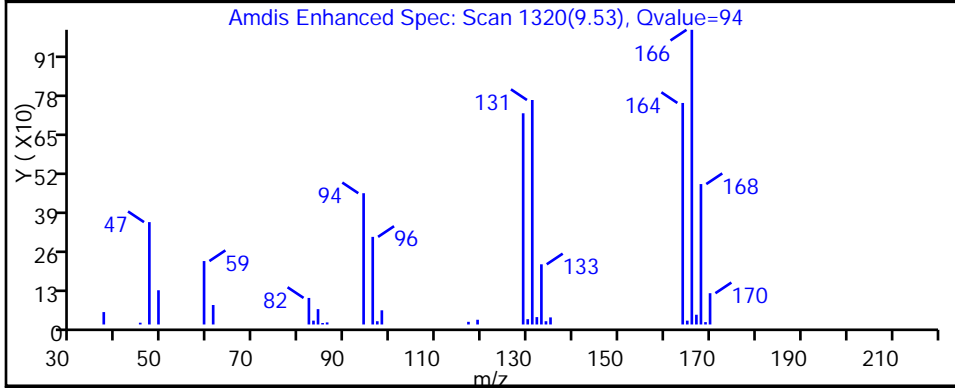
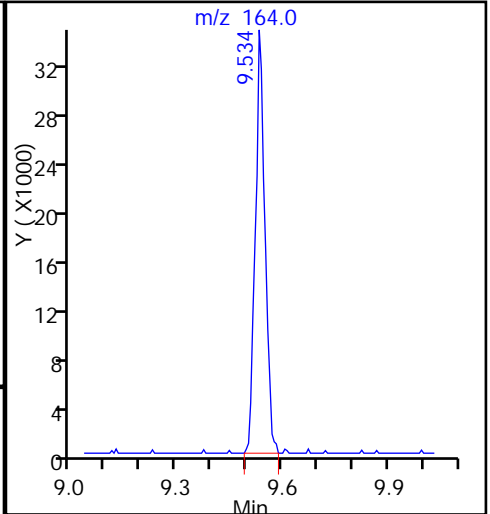
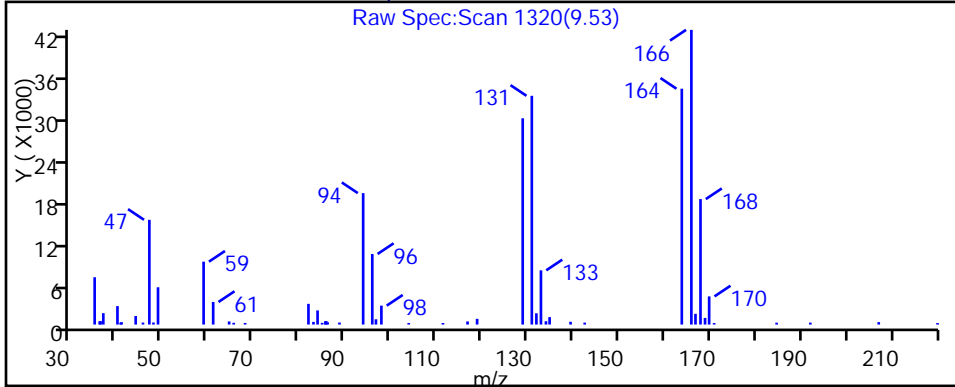
Method: MSVOA\_LL\_CHHP5

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC6-0/1-2 Lab Sample ID: 180-40617-6  
 Matrix: Water Lab File ID: 50128015.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 09:00  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 14:49  
 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.: 131906 Units: ug/L

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

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-QC6-0/1-2 Lab Sample ID: 180-40617-6  
 Matrix: Water Lab File ID: 50128015.D  
 Analysis Method: 8260C Date Collected: 01/20/2015 09:00  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 14:49  
 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.: 131906 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		64-135
2037-26-5	Toluene-d8 (Surr)	101		71-118
460-00-4	4-Bromofluorobenzene (Surr)	98		70-118
1868-53-7	Dibromofluoromethane (Surr)	117		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128015.D  
 Lims ID: 180-40617-B-6 Lab Sample ID: 180-40617-6  
 Client ID: HD-QC6-0/1-2  
 Sample Type: Client  
 Inject. Date: 28-Jan-2015 14:49:30 ALS Bottle#: 14 Worklist Smp#: 15  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: 180-40617-B-6  
 Misc. Info.: 180-0005445-015  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 16:28:43 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 16:28:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.297	4.308	-0.012	90	137714	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.276	0.001	99	420834	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	97	91957	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.685	-0.005	98	133391	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.534	-0.005	93	104684	58.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.899	0.007	91	144727	49.2	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	95	385525	50.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.535	-0.005	82	142115	48.8	
12 Chloromethane	50		1.783				ND	
13 Vinyl chloride	62		1.911				ND	
15 Bromomethane	94		2.270				ND	
16 Chloroethane	64		2.416				ND	
22 1,1-Dichloroethene	96		3.383				ND	
24 Acetone	43		3.499				ND	
26 Carbon disulfide	76		3.675				ND	
31 Methylene Chloride	84		4.156				ND	
33 Acrylonitrile	53		4.557				ND	
34 trans-1,2-Dichloroethene	96		4.563				ND	
35 Methyl tert-butyl ether	73		4.588				ND	
37 1,1-Dichloroethane	63		5.178				ND	
45 cis-1,2-Dichloroethene	96		5.938				ND	
46 2-Butanone (MEK)	43		5.987				ND	
49 Chlorobromomethane	128		6.224				ND	
52 Chloroform	83		6.352				ND	
53 1,1,1-Trichloroethane	97		6.534				ND	
56 Carbon tetrachloride	117		6.717				ND	
58 Benzene	78		6.954				ND	
59 1,2-Dichloroethane	62		6.990				ND	
64 Trichloroethene	130		7.666				ND	
67 1,2-Dichloropropane	63		7.903				ND	
70 1,4-Dioxane	88		8.049				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.195				ND	
74 cis-1,3-Dichloropropene	75		8.657				ND	
75 4-Methyl-2-pentanone (MIBK)	43		8.822				ND	
76 Toluene	91		8.992				ND	
77 trans-1,3-Dichloropropene	75		9.223				ND	
79 1,1,2-Trichloroethane	97		9.400				ND	
80 Tetrachloroethene	164		9.539				ND	
82 2-Hexanone	43		9.655				ND	
84 Chlorodibromomethane	129		9.789				ND	
85 Ethylene Dibromide	107		9.904				ND	
87 Chlorobenzene	112		10.391				ND	
89 1,1,1,2-Tetrachloroethane	131		10.476				ND	
90 Ethylbenzene	106		10.501				ND	
91 m-Xylene & p-Xylene	106		10.622				ND	
92 o-Xylene	106		11.012				ND	
93 Styrene	104		11.030				ND	
94 Bromoform	173		11.218				ND	
99 1,1,2,2-Tetrachloroethane	83		11.675				ND	
S 133 Xylenes, Total	106		1.000				ND	

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128015.D

Injection Date: 28-Jan-2015 14:49:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: 180-40617-B-6

Lab Sample ID: 180-40617-6

Worklist Smp#: 15

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

Purge Vol: 5.000 mL

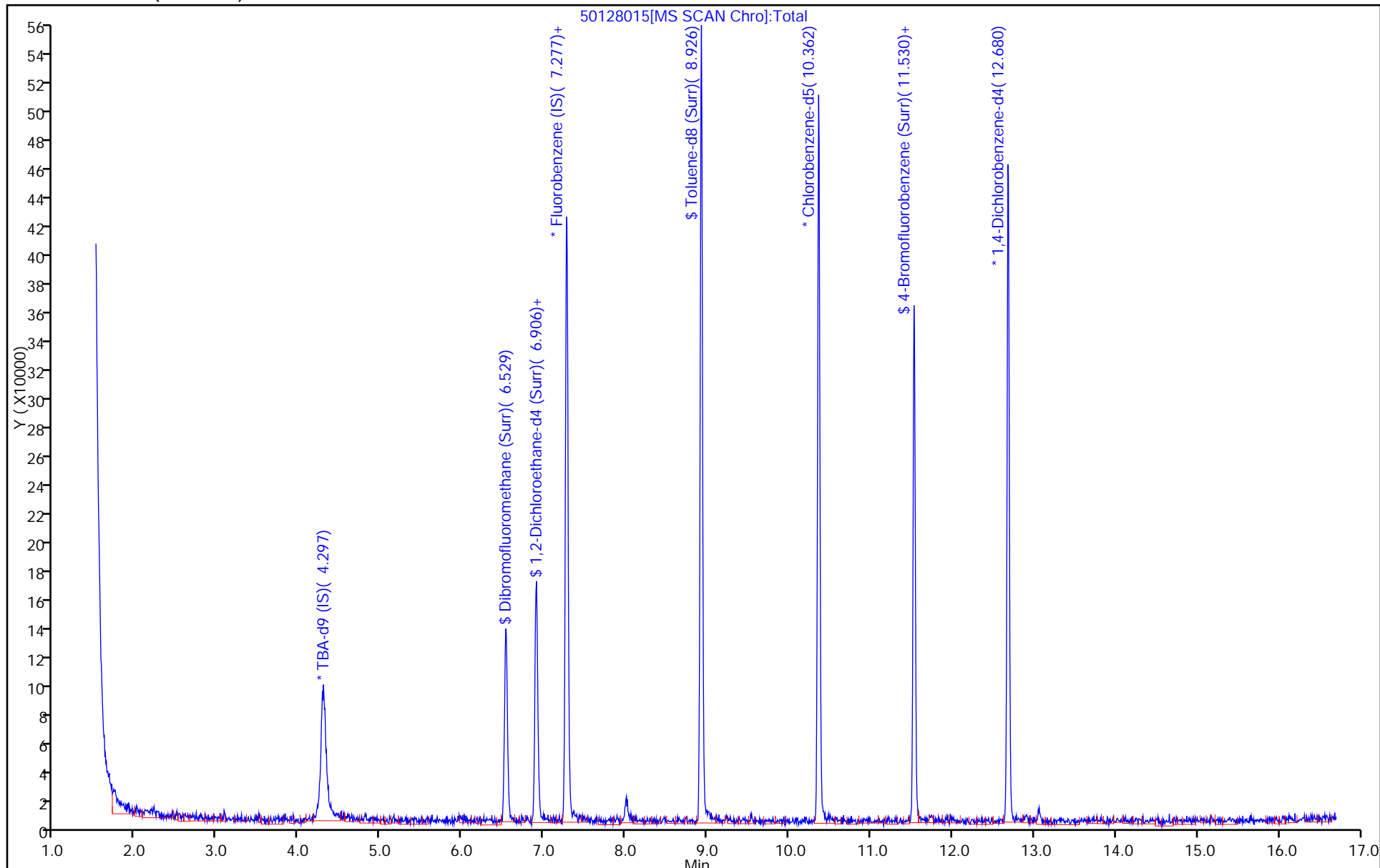
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-128329/7	51215007.D
Level 2	IC 180-128329/8	51215008.D
Level 3	ICIS 180-128329/9	51215009.D
Level 4	IC 180-128329/10	51215010.D
Level 5	IC 180-128329/11	51215011.D
Level 6	IC 180-128329/12	51215012.D
Level 7	IC 180-128329/13	51215013.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Dichlorodifluoromethane	0.3062 0.3035	0.3007 0.2973	0.3096	0.2868	0.2945	Ave		0.2998			0.1000	2.6	20.0				
Chloromethane	0.6637 0.5790	0.6196 0.5701	0.5840	0.5592	0.5646	Ave		0.5915			0.1000	6.3	20.0				
Vinyl chloride	0.4632 0.4075	0.4060 0.3966	0.3929	0.3822	0.3944	Ave		0.4061			0.1000	6.5	20.0				
1,3-Butadiene	0.6799 0.5615	0.6016 0.5472	0.5886	0.5249	0.5423	Ave		0.5780			0.0100	9.0	20.0				
Bromomethane	0.1497 0.1101	0.1243 0.1130	0.1171	0.1203	0.1157	Ave		0.1215			0.0500	11.0	20.0				
Chloroethane	0.2297 0.1928	0.2011 0.1991	0.1998	0.1915	0.1934	Ave		0.2011			0.0500	6.6	20.0				
Dichlorofluoromethane	0.4259 0.4011	0.4197 0.3917	0.3930	0.3904	0.3776	Ave		0.3999			0.0100	4.3	20.0				
Trichlorofluoromethane	0.2464 0.2726	0.2465 0.2680	0.2432	0.2385	0.2579	Ave		0.2533			0.1000	5.2	20.0				
Ethyl ether	0.4123 0.3465	0.3799 0.3621	0.3539	0.3391	0.3271	Ave		0.3601			0.0100	7.9	20.0				
Acrolein	0.0537 0.0556	0.0508 0.0567	0.0535	0.0536	0.0532	Ave		0.0539			0.0100	3.5	20.0				
1,1-Dichloroethene	0.2959 0.2801	0.2681 0.2703	0.2749	0.2562	0.2610	Ave		0.2724			0.1000	4.8	20.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3093 0.2836	0.2714 0.2795	0.2696	0.2530	0.2643	Ave		0.2758			0.1000	6.5	20.0				
Acetone	0.1576 0.1595	0.1627 0.1621	0.1605	0.1483	0.1467	Ave		0.1568			0.0500	4.2	20.0				
Iodomethane	0.3546 0.3562	0.3422 0.3744	0.3464	0.3310	0.3371	Ave		0.3488			0.0100	4.1	20.0				

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

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

Analy Batch No.: 128329

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

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33

Calibration End Date: 12/15/2014 16:57

Calibration ID: 20600

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															
Carbon disulfide	0.5435 0.5884	0.4817 0.6028	0.4812	0.4815	0.5166	Ave		0.5280			0.1000	9.8	20.0				
Allyl chloride	0.1418 0.1715	0.1437 0.1733	0.1474	0.1478	0.1505	Ave		0.1537			0.0100	8.5	20.0				
Methyl acetate	0.4835 0.4434	0.4663 0.4598	0.4584	0.4454	0.4301	Ave		0.4553			0.1000	3.8	20.0				
Methylene Chloride	0.6145 0.3099	0.3763 0.3145	0.3247	0.3071	0.3044	Lin2	1.5927	0.2976			0.1000			0.9990		0.9900	
tert-Butyl alcohol	1.3299 1.4355	1.3352 1.3666	1.3666	1.2618	1.2625	Ave		1.3369			0.0100	4.6	20.0				
Acrylonitrile	0.2160 0.2046	0.2155 0.2150	0.2130	0.2061	0.1987	Ave		0.2098			0.0100	3.2	20.0				
trans-1,2-Dichloroethene	0.2881 0.2757	0.2830 0.2741	0.2762	0.2705	0.2626	Ave		0.2757			0.1000	3.0	20.0				
Methyl tert-butyl ether	0.7303 0.7077	0.7203 0.7970	0.6858	0.6818	0.6790	Ave		0.7145			0.1000	5.8	20.0				
Hexane	0.8242 0.6885	0.6899 0.6819	0.6853	0.6457	0.6701	Ave		0.6980			0.0100	8.3	20.0				
1,1-Dichloroethane	0.6058 0.6436	0.6659 0.6663	0.6506	0.6346	0.6232	Ave		0.6414			0.2000	3.5	20.0				
Vinyl acetate	0.5940 0.6460	0.6125 0.6680	0.5955	0.5898	0.5998	Ave		0.6151			0.0100	4.9	20.0				
2,2-Dichloropropane	0.1514 0.1792	0.1813 0.1765	0.1728	0.1600	0.1691	Ave		0.1700			0.0100	6.4	20.0				
cis-1,2-Dichloroethene	0.3032 0.3027	0.3003 0.3109	0.2942	0.2891	0.2862	Ave		0.2981			0.1000	2.9	20.0				
2-Butanone (MEK)	0.2430 0.2534	0.2496 0.2673	0.2377	0.2336	0.2418	Ave		0.2466			0.0500	4.6	20.0				
Bromochloromethane	0.1229 0.1250	0.1272 0.1313	0.1241	0.1248	0.1151	Ave		0.1243			0.0100	4.0	20.0				
Tetrahydrofuran	0.2188 0.1877	0.1834 0.1953	0.1826	0.1724	0.1728	Ave		0.1876			0.0100	8.5	20.0				
Chloroform	0.5156 0.4784	0.4964 0.4915	0.4805	0.4705	0.4620	Ave		0.4850			0.2000	3.7	20.0				
1,1,1-Trichloroethane	0.3042 0.3279	0.3143 0.3287	0.3041	0.3089	0.3147	Ave		0.3147			0.1000	3.2	20.0				
Cyclohexane	0.8681 0.9030	0.9043 0.8876	0.8981	0.8552	0.8740	Ave		0.8843			0.1000	2.1	20.0				
Carbon tetrachloride	0.2572 0.2959	0.2558 0.2959	0.2737	0.2633	0.2713	Ave		0.2733			0.1000	6.1	20.0				

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

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

Analy Batch No.: 128329

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

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33

Calibration End Date: 12/15/2014 16:57

Calibration ID: 20600

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															
1,1-Dichloropropene	0.4048 0.4058	0.4019 0.4038	0.3999	0.3729	0.3899	Ave		0.3970			0.0100	3.0	20.0				
Isobutyl alcohol	0.0138 0.0157	0.0134 0.0168	0.0127	0.0135	0.0146	Ave		0.0144			0.0100	10.0	20.0				
Benzene	1.3519 1.1913	1.3153 1.2141	1.2337	1.1932	1.1554	Ave		1.2364			0.5000	5.8	20.0				
1,2-Dichloroethane	0.4692 0.4760	0.4989 0.4961	0.4921	0.4756	0.4530	Ave		0.4801			0.1000	3.4	20.0				
n-Heptane	0.7022 0.7243	0.7478 0.7132	0.7130	0.6587	0.6959	Ave		0.7079			0.0100	3.9	20.0				
Trichloroethene	0.2608 0.2714	0.2702 0.2689	0.2744	0.2530	0.2543	Ave		0.2647			0.2000	3.3	20.0				
Methylcyclohexane	0.4718 0.5254	0.4987 0.5263	0.5179	0.4936	0.5135	Ave		0.5067			0.1000	3.9	20.0				
1,2-Dichloropropane	0.3614 0.3820	0.3824 0.3991	0.3831	0.3789	0.3761	Ave		0.3804			0.1000	2.9	20.0				
Dibromomethane	0.1574 0.1588	0.1585 0.1657	0.1560	0.1528	0.1490	Ave		0.1569			0.0100	3.3	20.0				
1,4-Dioxane	0.0018 0.0031	0.0029 0.0032	0.0030	0.0030	0.0030	Ave		0.0028		*	0.0100	17.0	20.0				
Bromodichloromethane	0.3038 0.3401	0.3260 0.3569	0.3126	0.3150	0.3123	Ave		0.3238			0.2000	5.8	20.0				
cis-1,3-Dichloropropene	0.3050 0.4061	0.3383 0.4319	0.3563	0.3735	0.3754	Ave		0.3695			0.2000	11.0	20.0				
4-Methyl-2-pentanone (MIBK)	2.0070 2.0571	2.2983 2.1625	2.1794	2.1474	2.2651	Ave		2.1596			0.1000	4.8	20.0				
Toluene	6.0359 4.7325	5.9162 4.6763	5.4579	5.1255	5.2161	Ave		5.3086			0.4000	10.0	20.0				
trans-1,3-Dichloropropene	1.1102 1.3080	1.1630 1.3468	1.1734	1.1997	1.3019	Ave		1.2290			0.1000	7.3	20.0				
Ethyl methacrylate	1.1947 1.4902	1.5172 1.6056	1.4384	1.4484	1.5508	Ave		1.4636			0.0100	9.0	20.0				
1,1,2-Trichloroethane	1.1555 0.9528	1.1466 0.9887	1.0173	1.0002	1.0303	Ave		1.0416			0.1000	7.6	20.0				
Tetrachloroethene	1.2291 0.8845	1.0292 0.8744	0.9840	0.9051	0.9464	Ave		0.9790			0.2000	13.0	20.0				
1,3-Dichloropropane	2.2033 1.8410	2.2105 1.8880	1.9789	1.9418	1.9816	Ave		2.0065			0.0100	7.3	20.0				
2-Hexanone	1.4578 1.7305	1.8196 1.8071	1.8111	1.7292	1.7458	Ave		1.7287			0.1000	7.3	20.0				

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

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

Analy Batch No.: 128329

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

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33

Calibration End Date: 12/15/2014 16:57

Calibration ID: 20600

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															
Dibromochloromethane	0.6473 0.7990	0.7489 0.8288	0.7622	0.7731	0.8014	Ave		0.7658			0.1000	7.7	20.0				
1,2-Dibromoethane (EDB)	0.9405 0.9287	1.0364 0.9768	0.9830	0.9294	0.9669	Ave		0.9660			0.1000	4.0	20.0				
3-Chlorobenzotrifluoride	1.9305 1.6427	1.8876 1.6220	1.8725	1.5530	1.7078	Ave		1.7451			0.0100	8.6	20.0				
Chlorobenzene	3.5159 2.9720	3.6049 2.9950	3.2970	3.0280	3.1899	Ave		3.2289			0.5000	7.9	20.0				
4-Chlorobenzotrifluoride	1.7156 1.5705	1.7902 1.5099	1.7285	1.4987	1.6016	Ave		1.6307			0.0100	7.0	20.0				
1,1,1,2-Tetrachloroethane	1.0970 0.9306	1.0515 0.9664	0.9591	0.9304	0.9598	Ave		0.9850			0.0100	6.5	20.0				
Ethylbenzene	1.8648 1.7480	2.0129 1.7278	1.8616	1.7465	1.8341	Ave		1.8280			0.1000	5.5	20.0				
m-Xylene & p-Xylene	2.2615 2.0929	2.4124 2.1071	2.2773	2.1567	2.2774	Ave		2.2265			0.1000	5.1	20.0				
o-Xylene	2.3040 2.0200	2.3242 2.0332	2.2475	2.0639	2.1564	Ave		2.1642			0.3000	6.0	20.0				
Styrene	3.7316 3.3938	4.0109 3.4490	3.7186	3.5198	3.6725	Ave		3.6423			0.3000	5.8	20.0				
Bromoform	0.4456 0.5152	0.4839 0.5501	0.4374	0.4616	0.4945	Ave		0.4840			0.1000	8.3	20.0				
2-Chlorobenzotrifluoride	1.8418 1.5775	1.7892 1.5720	1.7719	1.4902	1.6472	Ave		1.6700			0.0100	7.9	20.0				
Isopropylbenzene	5.6536 5.0088	5.9572 4.9562	5.6220	5.1272	5.4768	Ave		5.4003			0.1000	7.0	20.0				
1,1,2,2-Tetrachloroethane	1.5283 1.3751	1.5606 1.4205	1.5222	1.3994	1.4421	Ave		1.4640			0.3000	4.9	20.0				
Bromobenzene	0.9205 0.8986	0.8841 0.9055	0.9107	0.8919	0.8850	Ave		0.8995			0.0100	1.5	20.0				
1,2,3-Trichloropropane	0.3600 0.3179	0.3372 0.3223	0.3254	0.3199	0.3067	Ave		0.3271			0.0100	5.2	20.0				
trans-1,4-Dichloro-2-butene	0.4447 0.4690	0.4309 0.4842	0.4274	0.4444	0.4435	Ave		0.4491			0.0100	4.5	20.0				
N-Propylbenzene	0.9560 1.0924	1.1066 1.0687	1.0963	1.0332	1.0802	Ave		1.0619			0.0100	4.9	20.0				
2-Chlorotoluene	0.8211 0.9168	0.9285 0.9003	0.8969	0.9069	0.9008	Ave		0.8959			0.0100	3.9	20.0				
3-Chlorotoluene	0.9239 0.9727	0.9611 0.9646	1.0262	0.8918	0.9450	Ave		0.9551			0.0100	4.4	20.0				

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

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

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

Analy Batch No.: 128329

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

Instrument ID: CHHP5

GC Column: DB-624

ID: 0.18 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 12/15/2014 14:33

Calibration End Date: 12/15/2014 16:57

Calibration ID: 20600

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															
1,3,5-Trimethylbenzene	2.8893 3.1586	3.3493 3.0976	3.4132	3.1484	3.2126	Ave		3.1813			0.0100	5.4	20.0				
4-Chlorotoluene	0.9692 0.9746	1.0581 0.9610	1.0351	1.0076	0.9634	Ave		0.9956			0.0100	3.9	20.0				
tert-Butylbenzene	2.5326 2.6058	2.6961 2.5139	2.7638	2.5398	2.6191	Ave		2.6102			0.0100	3.5	20.0				
1,2,4-Trimethylbenzene	2.9734 3.2760	3.4242 3.1725	3.4768	3.2565	3.3016	Ave		3.2687			0.0100	5.1	20.0				
3,4-Dichlorobenzotrifluoride	0.8211 0.9324	0.9362 0.8896	0.9759	0.8538	0.8958	Ave		0.9007			0.0100	5.8	20.0				
sec-Butylbenzene	3.6490 3.7139	4.0269 3.5563	3.9933	3.6596	3.7287	Ave		3.7611			0.0100	4.8	20.0				
1,3-Dichlorobenzene	1.6505 1.7094	1.8078 1.6809	1.7367	1.6350	1.6636	Ave		1.6977			0.6000	3.5	20.0				
4-Isopropyltoluene	2.5890 3.1017	3.1830 3.0029	3.1952	2.9981	3.1339	Ave		3.0291			0.0100	6.9	20.0				
1,4-Dichlorobenzene	1.8014 1.7329	1.8463 1.7160	1.8095	1.6691	1.6954	Ave		1.7529			0.5000	3.8	20.0				
2,4-Dichlorobenzotrifluoride	0.8747 0.8755	0.8388 0.8332	0.8871	0.7933	0.8139	Ave		0.8452			0.0100	4.2	20.0				
2,5-Dichlorobenzotrifluoride	0.8497 0.9920	0.9280 0.9209	1.0056	0.8587	0.8984	Ave		0.9219			0.0100	6.5	20.0				
n-Butylbenzene	2.5353 2.8684	2.8549 2.7187	2.9413	2.6282	2.8270	Ave		2.7677			0.0100	5.3	20.0				
1,2-Dichlorobenzene	1.6407 1.5644	1.6011 1.5586	1.5884	1.5314	1.5442	Ave		1.5755			0.4000	2.4	20.0				
1,2-Dibromo-3-Chloropropane	0.1163 0.1658	0.1207 0.1706	0.1479	0.1376	0.1413	Ave		0.1429			0.0500	14.0	20.0				
1,2,4-Trichlorobenzene	0.5828 0.7218	0.6250 0.7095	0.7015	0.6008	0.6337	Ave		0.6536			0.2000	8.6	20.0				
Hexachlorobutadiene	0.2994 0.3366	0.3355 0.3109	0.3203	0.2715	0.2955	Ave		0.3100			0.0100	7.5	20.0				
Naphthalene	1.3603 1.9278	1.6284 1.9822	1.8118	1.7337	1.7675	Ave		1.7445			0.0100	12.0	20.0				
1,2,3-Trichlorobenzene	0.4343 0.5624	0.5181 0.5733	0.5246	0.4787	0.4962	Ave		0.5125			0.0100	9.4	20.0				
2,4,5-Trichlorotoluene	0.1942 0.2578	0.2021 0.2596	0.2252	0.1774	0.2073	Ave		0.2177			0.0100	14.0	20.0				
2,3,6-Trichlorotoluene	0.1764 0.2369	0.1790 0.2357	0.2137	0.1716	0.1829	Ave		0.1994			0.0100	14.0	20.0				

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

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

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															
Dibromofluoromethane (Surr)	0.2245 0.2062	0.2288 0.2174	0.2234	0.2083	0.1810	Ave		0.2128			7.7		20.0				
1,2-Dichloroethane-d4 (Surr)	0.3899 0.3406	0.3669 0.3434	0.3628	0.3333	0.3090	Ave		0.3494			7.5		20.0				
Toluene-d8 (Surr)	5.1132 3.6362	4.7853 3.6126	4.4498	3.8300	3.6860	Ave		4.1590			15.0		20.0				
4-Bromofluorobenzene (Surr)	1.8605 1.4396	1.7155 1.4844	1.6637	1.4593	1.4695	Ave		1.5846			10.0		20.0				

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

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-128329/7	51215007.D
Level 2	IC 180-128329/8	51215008.D
Level 3	ICIS 180-128329/9	51215009.D
Level 4	IC 180-128329/10	51215010.D
Level 5	IC 180-128329/11	51215011.D
Level 6	IC 180-128329/12	51215012.D
Level 7	IC 180-128329/13	51215013.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	13529 461200	61930 499452	131229	190564	273288	5.00 175	25.0 200	50.0	75.0	100
Chloromethane	FB	Ave	29328 879810	127605 957633	247505	371573	523947	5.00 175	25.0 200	50.0	75.0	100
Vinyl chloride	FB	Ave	20471 619242	83604 666295	166505	253937	365992	5.00 175	25.0 200	50.0	75.0	100
1,3-Butadiene	FB	Ave	30044 853165	123895 919270	249438	348720	503293	5.00 175	25.0 200	50.0	75.0	100
Bromomethane	FB	Ave	6616 167265	25599 189870	49618	79919	107362	5.00 175	25.0 200	50.0	75.0	100
Chloroethane	FB	Ave	10151 292962	41416 334503	84692	127211	179530	5.00 175	25.0 200	50.0	75.0	100
Dichlorofluoromethane	FB	Ave	18822 609495	86441 658021	166568	259364	350450	5.00 175	25.0 200	50.0	75.0	100
Trichlorofluoromethane	FB	Ave	10889 414214	50772 450195	103060	158442	239313	5.00 175	25.0 200	50.0	75.0	100
Ethyl ether	FB	Ave	18218 526502	78240 608282	149984	225291	303566	5.00 175	25.0 200	50.0	75.0	100
Acrolein	FB	Ave	47439 108540	52294 119026	67959	83110	98752	100 225	125 250	150	175	200
1,1-Dichloroethene	FB	Ave	13078 425581	55204 454023	116523	170252	242263	5.00 175	25.0 200	50.0	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	13668 430964	55892 469441	114250	168083	245306	5.00 175	25.0 200	50.0	75.0	100
Acetone	FB	Ave	34830 484655	67024 544467	136052	197095	272377	25.0 350	50.0 400	100	150	200
Iodomethane	FB	Ave	15672 541195	70477 628901	146806	219902	312818	5.00 175	25.0 200	50.0	75.0	100
Carbon disulfide	FB	Ave	24017 894088	99203 1012677	203932	319940	479421	5.00 175	25.0 200	50.0	75.0	100



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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Allyl chloride	FB	Ave	6268 260534	29594 291169	62463	98218	139671	5.00 175	25.0 200	50.0	75.0	100
Methyl acetate	FB	Ave	106822 3368843	480132 3862317	971398	1479687	1995763	25.0 875	125 1000	250	375	500
Methylene Chloride	FB	Lin2	27156 470925	77498 528356	137628	204036	282467	5.00 175	25.0 200	50.0	75.0	100
tert-Butyl alcohol	TBA	Ave	11568 472853	53537 542078	112567	171520	233721	50.0 1750	250 2000	500	750	1000
Acrylonitrile	FB	Ave	95445 3108626	443739 3610987	902499	1369178	1844438	50.0 1750	250 2000	500	750	1000
trans-1,2-Dichloroethene	FB	Ave	12732 418880	58272 460491	117057	179704	243743	5.00 175	25.0 200	50.0	75.0	100
Methyl tert-butyl ether	FB	Ave	32273 1075251	148333 1338818	290628	452968	630126	5.00 175	25.0 200	50.0	75.0	100
Hexane	FB	Ave	36423 1046157	142088 1145508	290414	429042	621883	5.00 175	25.0 200	50.0	75.0	100
1,1-Dichloroethane	FB	Ave	26772 977975	137137 1119222	275718	421630	578361	5.00 175	25.0 200	50.0	75.0	100
Vinyl acetate	FB	Ave	26249 981516	126129 1122187	252355	391840	556672	5.00 175	25.0 200	50.0	75.0	100
2,2-Dichloropropane	FB	Ave	6692 272347	37334 296455	73219	106300	156961	5.00 175	25.0 200	50.0	75.0	100
cis-1,2-Dichloroethene	FB	Ave	13397 459987	61838 522231	124677	192115	265573	5.00 175	25.0 200	50.0	75.0	100
2-Butanone (MEK)	FB	Ave	53686 770041	102794 898036	201478	310437	448845	25.0 350	50.0 400	100	150	200
Bromochloromethane	FB	Ave	5430 189932	26193 220532	52609	82921	106775	5.00 175	25.0 200	50.0	75.0	100
Tetrahydrofuran	FB	Ave	19338 570461	75527 656256	154760	229135	320665	10.0 350	50.0 400	100	150	200
Chloroform	FB	Ave	22786 726926	102224 825564	203645	312586	428736	5.00 175	25.0 200	50.0	75.0	100
1,1,1-Trichloroethane	FB	Ave	13443 498247	64719 552222	128898	205239	292080	5.00 175	25.0 200	50.0	75.0	100
Cyclohexane	FB	Ave	38360 1372084	186239 1491081	380610	568225	811131	5.00 175	25.0 200	50.0	75.0	100
Carbon tetrachloride	FB	Ave	11364 449549	52672 496996	115997	174921	251804	5.00 175	25.0 200	50.0	75.0	100
1,1-Dichloropropene	FB	Ave	17888 616547	82768 678270	169491	247738	361815	5.00 175	25.0 200	50.0	75.0	100
Isobutyl alcohol	FB	Ave	15202 597870	69212 703715	134692	224509	339131	125 4375	625 5000	1250	1875	2500

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	59741 1810201	270867 2039448	522828	792783	1072233	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichloroethane	FB	Ave	20733 723279	102748 833342	208535	315981	420406	5.00 175	25.0 200	50.0	75.0	100
n-Heptane	FB	Ave	31030 1100542	153997 1198073	302184	437674	645815	5.00 175	25.0 200	50.0	75.0	100
Trichloroethene	FB	Ave	11525 412412	55641 451795	116274	168085	236014	5.00 175	25.0 200	50.0	75.0	100
Methylcyclohexane	FB	Ave	20849 798320	102702 884141	219487	327984	476530	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichloropropane	FB	Ave	15972 580507	78759 670378	162350	251775	349012	5.00 175	25.0 200	50.0	75.0	100
Dibromomethane	FB	Ave	6955 241280	32637 278367	66098	101536	138247	5.00 175	25.0 200	50.0	75.0	100
1,4-Dioxane	FB	Ave	1571 94223	11752 107491	25491	40031	55226	100 3500	500 4000	1000	1500	2000
Bromodichloromethane	FB	Ave	13427 516759	67146 599497	132486	209313	289837	5.00 175	25.0 200	50.0	75.0	100
cis-1,3-Dichloropropene	FB	Ave	13480 617016	69677 725599	151006	248192	348436	5.00 175	25.0 200	50.0	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	91901 1587323	204955 1885405	427228	691017	949167	25.0 350	50.0 400	100	150	200
Toluene	CBZ	Ave	55276 1825825	263797 2038543	534952	824691	1092848	5.00 175	25.0 200	50.0	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	10167 504625	51858 587120	115007	193036	272778	5.00 175	25.0 200	50.0	75.0	100
Ethyl methacrylate	CBZ	Ave	10941 574920	67652 699914	140983	233054	324927	5.00 175	25.0 200	50.0	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	10582 367605	51126 431008	99708	160928	215870	5.00 175	25.0 200	50.0	75.0	100
Tetrachloroethene	CBZ	Ave	11256 341247	45891 381182	96447	145626	198281	5.00 175	25.0 200	50.0	75.0	100
1,3-Dichloropropane	CBZ	Ave	20178 710288	98564 823013	193960	312441	415185	5.00 175	25.0 200	50.0	75.0	100
2-Hexanone	CBZ	Ave	66751 1335292	162269 1575531	355030	556468	731532	25.0 350	50.0 400	100	150	200
Dibromochloromethane	CBZ	Ave	5928 308265	33391 361304	74703	124399	167905	5.00 175	25.0 200	50.0	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	8613 358303	46214 425795	96348	149545	202583	5.00 175	25.0 200	50.0	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	17679 633751	84167 707075	183531	249882	357810	5.00 175	25.0 200	50.0	75.0	100

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBZ	Ave	32198 1146615	160738 1305587	323152	487195	668345	5.00 175	25.0 200	50.0	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	15711 605917	79821 658198	169416	241146	335563	5.00 175	25.0 200	50.0	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	10046 359052	46887 421291	94003	149698	201091	5.00 175	25.0 200	50.0	75.0	100
Ethylbenzene	CBZ	Ave	17078 674389	89754 753212	182469	281017	384275	5.00 175	25.0 200	50.0	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	20711 807449	107568 918551	223210	347010	477144	5.00 175	25.0 200	50.0	75.0	100
o-Xylene	CBZ	Ave	21100 779332	103634 886345	220291	332078	451799	5.00 175	25.0 200	50.0	75.0	100
Styrene	CBZ	Ave	34174 1309347	178842 1503510	364481	566334	769446	5.00 175	25.0 200	50.0	75.0	100
Bromoform	CBZ	Ave	4081 198764	21578 239804	42875	74265	103601	5.00 175	25.0 200	50.0	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	16867 608627	79779 685270	173668	239775	345106	5.00 175	25.0 200	50.0	75.0	100
Isopropylbenzene	CBZ	Ave	51775 1932433	265627 2160550	551045	824955	1147487	5.00 175	25.0 200	50.0	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	13996 530535	69587 619241	149203	225157	302138	5.00 175	25.0 200	50.0	75.0	100
Bromobenzene	DCB	Ave	12328 454034	56843 526184	121949	188616	258939	5.00 175	25.0 200	50.0	75.0	100
1,2,3-Trichloropropane	DCB	Ave	4822 160641	21680 187299	43578	67651	89733	5.00 175	25.0 200	50.0	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	5956 236954	27704 281348	57235	93980	129754	5.00 175	25.0 200	50.0	75.0	100
N-Propylbenzene	DCB	Ave	12803 551938	71151 621025	146805	218494	316053	5.00 175	25.0 200	50.0	75.0	100
2-Chlorotoluene	DCB	Ave	10997 463229	59697 523196	120100	191792	263552	5.00 175	25.0 200	50.0	75.0	100
3-Chlorotoluene	DCB	Ave	12374 491483	61796 560555	137425	188584	276497	5.00 175	25.0 200	50.0	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	38695 1595887	215352 1800040	457058	665788	939917	5.00 175	25.0 200	50.0	75.0	100
4-Chlorotoluene	DCB	Ave	12980 492402	68035 558467	138608	213085	281879	5.00 175	25.0 200	50.0	75.0	100
tert-Butylbenzene	DCB	Ave	33918 1316602	173354 1460867	370100	537092	766289	5.00 175	25.0 200	50.0	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	39821 1655214	220166 1843606	465575	688660	965955	5.00 175	25.0 200	50.0	75.0	100

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3,4-Dichlorobenzotrifluoride	DCB	Ave	10996 471091	60194 516955	130684	180560	262077	5.00 175	25.0 200	50.0	75.0	100
sec-Butylbenzene	DCB	Ave	48869 1876479	258920 2066631	534748	773895	1090919	5.00 175	25.0 200	50.0	75.0	100
1,3-Dichlorobenzene	DCB	Ave	22104 863694	116233 976811	232561	345748	486729	5.00 175	25.0 200	50.0	75.0	100
4-Isopropyltoluene	DCB	Ave	34674 1567173	204657 1745049	427869	634008	916889	5.00 175	25.0 200	50.0	75.0	100
1,4-Dichlorobenzene	DCB	Ave	24125 875578	118712 997200	242307	352959	496017	5.00 175	25.0 200	50.0	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	11714 442330	53932 484207	118794	167750	238127	5.00 175	25.0 200	50.0	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	11380 501230	59666 535139	134654	181592	262855	5.00 175	25.0 200	50.0	75.0	100
n-Butylbenzene	DCB	Ave	33954 1449265	183563 1579894	393872	555780	827117	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichlorobenzene	DCB	Ave	21973 790430	102943 905753	212701	323846	451798	5.00 175	25.0 200	50.0	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	1557 83763	7760 99113	19807	29088	41345	5.00 175	25.0 200	50.0	75.0	100
1,2,4-Trichlorobenzene	DCB	Ave	7805 364694	40187 412323	93933	127051	185414	5.00 175	25.0 200	50.0	75.0	100
Hexachlorobutadiene	DCB	Ave	4010 170084	21572 180674	42898	57408	86456	5.00 175	25.0 200	50.0	75.0	100
Naphthalene	DCB	Ave	18218 974048	104700 1151885	242621	366622	517111	5.00 175	25.0 200	50.0	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	5816 284156	33314 333142	70246	101227	145164	5.00 175	25.0 200	50.0	75.0	100
2,4,5-Trichlorotoluene	DCB	Ave	2601 130241	12992 150868	30153	37510	60662	5.00 175	25.0 200	50.0	75.0	100
2,3,6-Trichlorotoluene	DCB	Ave	2362 119691	11506 136944	28614	36291	53522	5.00 175	25.0 200	50.0	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	9922 313362	47124 365236	94689	138420	167966	5.00 175	25.0 200	50.0	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	17231 517527	75553 576810	153750	221449	286774	5.00 175	25.0 200	50.0	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	46826 1402860	213372 1574848	436152	616248	772272	5.00 175	25.0 200	50.0	75.0	100
4-Bromofluorobenzene (Surr)	CBZ	Ave	17038 555403	76492 647101	163066	234795	307884	5.00 175	25.0 200	50.0	75.0	100

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

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 128329

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

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

Calibration Start Date: 12/15/2014 14:33 Calibration End Date: 12/15/2014 16:57 Calibration ID: 20600

Curve Type Legend:

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

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D  
 Lims ID: IC VSTD1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 15-Dec-2014 14:33:30 ALS Bottle#: 7 Worklist Smp#: 7  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD1  
 Misc. Info.: 180-0004875-007  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 08:51:05 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond

Date: 15-Dec-2014 16:41:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.326	4.336	-0.010	87	173968	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.295	7.298	-0.003	96	441903	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.383	0.002	94	91579	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.703	12.707	-0.004	96	133926	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.546	6.556	-0.010	81	9922	5.00	5.28	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.930	6.921	0.009	92	17231	5.00	5.58	
\$ 7 Toluene-d8 (Surr)	98	8.943	8.947	-0.004	94	46826	5.00	6.15	
\$ 8 4-Bromofluorobenzene (Surr	95	11.541	11.551	-0.010	85	17038	5.00	5.87	
11 Dichlorodifluoromethane	85	1.631	1.629	0.002	85	13529	5.00	5.11	
12 Chloromethane	50	1.807	1.799	0.008	98	29328	5.00	5.61	
13 Vinyl chloride	62	1.935	1.927	0.008	94	20471	5.00	5.70	
14 Butadiene	39	1.972	1.975	-0.003	95	30044	5.00	5.88	
15 Bromomethane	94	2.276	2.292	-0.016	16	6616	5.00	6.16	
16 Chloroethane	64	2.440	2.438	0.002	93	10151	5.00	5.71	
17 Dichlorofluoromethane	67	2.689	2.687	0.002	94	18822	5.00	5.33	
18 Trichlorofluoromethane	101	2.720	2.736	-0.016	91	10889	5.00	4.86	M
20 Ethyl ether	59	3.115	3.113	0.002	94	18218	5.00	5.72	
21 Acrolein	56	3.292	3.289	0.003	98	47439	100.0	99.7	
22 1,1-Dichloroethene	96	3.395	3.435	-0.040	5	13078	5.00	5.43	M
23 1,1,2-Trichloro-1,2,2-trif	101	3.480	3.466	0.014	72	13668	5.00	5.61	
24 Acetone	43	3.517	3.527	-0.010	96	34830	25.0	25.1	
25 Iodomethane	142	3.657	3.667	-0.010	73	15672	5.00	5.08	M
26 Carbon disulfide	76	3.705	3.709	-0.004	87	24017	5.00	5.15	
28 3-Chloro-1-propene	76	3.973	3.971	0.002	89	6268	5.00	4.61	
30 Methyl acetate	43	4.058	4.050	0.008	99	106822	25.0	26.5	
31 Methylene Chloride	84	4.180	4.172	0.008	88	27156	5.00	4.97	M
32 2-Methyl-2-propanol	59	4.454	4.464	-0.010	78	11568	50.0	49.7	
33 Acrylonitrile	53	4.581	4.585	-0.004	100	95445	50.0	51.5	
34 trans-1,2-Dichloroethene	96	4.587	4.597	-0.010	64	12732	5.00	5.22	
35 Methyl tert-butyl ether	73	4.624	4.622	0.002	82	32273	5.00	5.11	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.013	5.017	-0.004	94	36423	5.00	5.90	
37 1,1-Dichloroethane	63	5.196	5.200	-0.004	97	26772	5.00	4.72	
38 Vinyl acetate	43	5.317	5.321	-0.004	96	26249	5.00	4.83	
44 2,2-Dichloropropane	77	5.962	5.954	0.008	49	6692	5.00	4.45	
45 cis-1,2-Dichloroethene	96	5.975	5.966	0.008	91	13397	5.00	5.09	
46 2-Butanone (MEK)	43	6.017	6.015	0.002	97	53686	25.0	24.6	
49 Chlorobromomethane	128	6.248	6.246	0.002	78	5430	5.00	4.94	
51 Tetrahydrofuran	42	6.315	6.313	0.002	91	19338	10.0	11.7	
52 Chloroform	83	6.370	6.362	0.008	95	22786	5.00	5.32	
53 1,1,1-Trichloroethane	97	6.546	6.550	-0.004	94	13443	5.00	4.83	
54 Cyclohexane	56	6.601	6.611	-0.010	90	38360	5.00	4.91	
56 Carbon tetrachloride	117	6.735	6.739	-0.004	87	11364	5.00	4.71	
55 1,1-Dichloropropene	75	6.753	6.745	0.008	81	17888	5.00	5.10	
57 Isobutyl alcohol	41	6.966	6.964	0.002	46	15202	125.0	119.8	
58 Benzene	78	6.972	6.982	-0.010	95	59741	5.00	5.47	
59 1,2-Dichloroethane	62	7.009	7.013	-0.004	95	20733	5.00	4.89	
62 n-Heptane	43	7.301	7.298	0.003	59	31030	5.00	4.96	
64 Trichloroethene	130	7.696	7.688	0.008	88	11525	5.00	4.93	
66 Methylcyclohexane	83	7.885	7.882	0.003	92	20849	5.00	4.66	
67 1,2-Dichloropropane	63	7.927	7.925	0.002	95	15972	5.00	4.75	
68 Dibromomethane	93	8.043	8.041	0.002	77	6955	5.00	5.02	
70 1,4-Dioxane	88	8.079	8.077	0.002	45	1571	100.0	62.4	
71 Dichlorobromomethane	83	8.225	8.217	0.008	93	13427	5.00	4.69	
74 cis-1,3-Dichloropropene	75	8.682	8.679	0.003	84	13480	5.00	4.13	
75 4-Methyl-2-pentanone (MIBK)	43	8.846	8.844	0.002	96	91901	25.0	23.2	
76 Toluene	91	9.010	9.008	0.002	96	55276	5.00	5.68	
77 trans-1,3-Dichloropropene	75	9.247	9.239	0.008	89	10167	5.00	4.52	
78 Ethyl methacrylate	69	9.333	9.336	-0.003	84	10941	5.00	4.08	
79 1,1,2-Trichloroethane	97	9.418	9.422	-0.004	92	10582	5.00	5.55	
80 Tetrachloroethene	164	9.558	9.555	0.003	91	11256	5.00	6.28	
81 1,3-Dichloropropane	76	9.588	9.586	0.002	89	20178	5.00	5.49	
82 2-Hexanone	43	9.679	9.677	0.002	98	66751	25.0	21.1	
84 Chlorodibromomethane	129	9.807	9.811	-0.004	91	5928	5.00	4.23	
85 Ethylene Dibromide	107	9.917	9.920	-0.003	94	8613	5.00	4.87	
86 3-Chlorobenzotrifluoride	180	10.385	10.389	-0.004	55	17679	5.00	5.53	
87 Chlorobenzene	112	10.415	10.413	0.002	87	32198	5.00	5.44	
88 4-Chlorobenzotrifluoride	180	10.446	10.450	-0.004	87	15711	5.00	5.26	
89 1,1,1,2-Tetrachloroethane	131	10.495	10.492	0.003	85	10046	5.00	5.57	
90 Ethylbenzene	106	10.519	10.523	-0.004	98	17078	5.00	5.10	
91 m-Xylene & p-Xylene	106	10.641	10.638	0.003	96	20711	5.00	5.08	
92 o-Xylene	106	11.036	11.034	0.002	97	21100	5.00	5.32	
93 Styrene	104	11.042	11.046	-0.004	90	34174	5.00	5.12	
94 Bromoform	173	11.231	11.234	-0.003	55	4081	5.00	4.60	
96 2-Chlorobenzotrifluoride	180	11.291	11.295	-0.004	96	16867	5.00	5.51	
97 Isopropylbenzene	105	11.401	11.399	0.002	97	51775	5.00	5.23	
99 1,1,2,2-Tetrachloroethane	83	11.693	11.691	0.002	77	13996	5.00	5.22	
100 Bromobenzene	156	11.705	11.703	0.002	94	12328	5.00	5.12	
101 1,2,3-Trichloropropane	110	11.729	11.739	-0.010	85	4822	5.00	5.50	
102 trans-1,4-Dichloro-2-buten	53	11.754	11.752	0.002	63	5956	5.00	4.95	
103 N-Propylbenzene	120	11.809	11.806	0.003	100	12803	5.00	4.50	
104 2-Chlorotoluene	126	11.900	11.898	0.002	93	10997	5.00	4.58	
105 3-Chlorotoluene	126	11.961	11.952	0.009	97	12374	5.00	4.84	

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	11.979	11.983	-0.004	94	38695	5.00	4.54	
107 4-Chlorotoluene	126	12.003	12.001	0.002	94	12980	5.00	4.87	
108 tert-Butylbenzene	119	12.307	12.305	0.002	96	33918	5.00	4.85	
110 1,2,4-Trimethylbenzene	105	12.356	12.354	0.002	96	39821	5.00	4.55	
111 1,2-dichloro-4-(trifluorom	214	12.423	12.421	0.002	94	10996	5.00	4.56	
112 sec-Butylbenzene	105	12.526	12.524	0.002	95	48869	5.00	4.85	
113 1,3-Dichlorobenzene	146	12.636	12.640	-0.004	95	22104	5.00	4.86	
114 4-Isopropyltoluene	119	12.672	12.670	0.002	95	34674	5.00	4.27	
115 1,4-Dichlorobenzene	146	12.721	12.725	-0.004	93	24125	5.00	5.14	
116 2,4-Dichloro-1-(trifluorom	214	12.782	12.780	0.002	93	11714	5.00	5.17	
118 2,5-Dichlorobenzotrifluori	214	12.831	12.828	0.003	96	11380	5.00	4.61	
120 n-Butylbenzene	91	13.080	13.078	0.002	98	33954	5.00	4.58	
121 1,2-Dichlorobenzene	146	13.104	13.102	0.002	94	21973	5.00	5.21	
122 1,2-Dibromo-3-Chloropropan	75	13.871	13.881	-0.010	71	1557	5.00	4.07	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.023	14.027	-0.004	96	31645	15.0	11.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.449	14.447	0.002	96	22583	10.0	8.91	
126 1,2,4-Trichlorobenzene	180	14.710	14.708	0.002	93	7805	5.00	4.46	
127 Hexachlorobutadiene	225	14.887	14.885	0.002	92	4010	5.00	4.83	
128 Naphthalene	128	14.960	14.964	-0.004	97	18218	5.00	3.90	
129 1,2,3-Trichlorobenzene	180	15.209	15.207	0.002	88	5816	5.00	4.24	
131 2,4,5-Trichlorotoluene	159	15.982	15.980	0.002	92	2601	5.00	4.46	
130 2,3,6-Trichlorotoluene	159	16.079	16.077	0.002	89	2362	5.00	4.42	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-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		10.0	10.3	
S 133 Xylenes, Total	106				0		10.0	10.4	
S 135 1,3-Dichloropropene, Total	1				0		10.0	8.64	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOA8260SURR_00028	Amount Added: 0.20	Units: uL	
VOA8260VOAPRI_00092	Amount Added: 0.20	Units: uL	
voaWEEpri Res_00001	Amount Added: 0.20	Units: uL	
voaWVA pri Re_00005	Amount Added: 0.20	Units: uL	
voaWKet2ndRes_00005	Amount Added: 0.80	Units: uL	
VOAACROPRI_00004	Amount Added: 4.00	Units: uL	
VOA8260INT_00026	Amount Added: 2.00	Units: uL	Run Reagent



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D

Injection Date: 15-Dec-2014 14:33:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD1

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

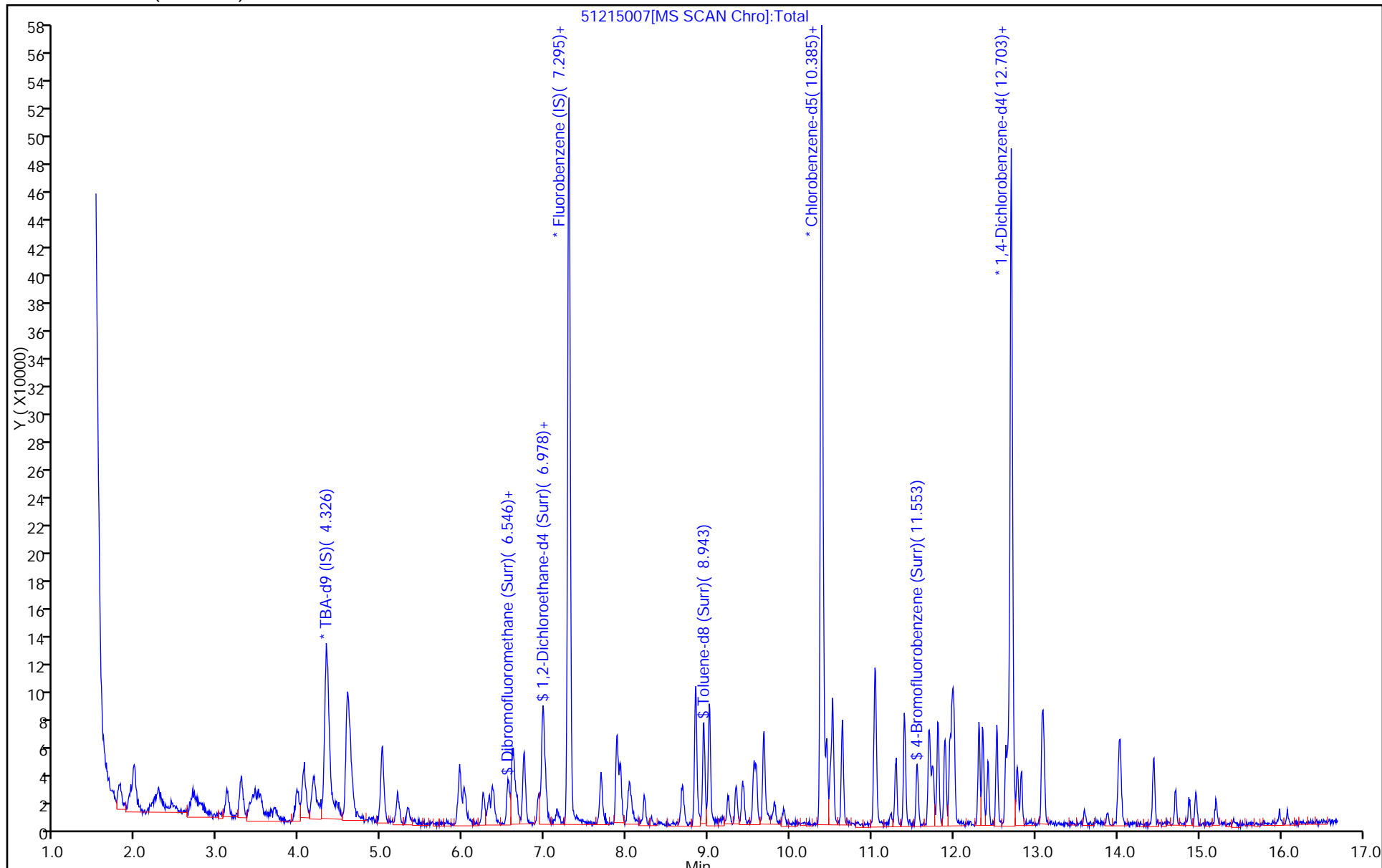
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



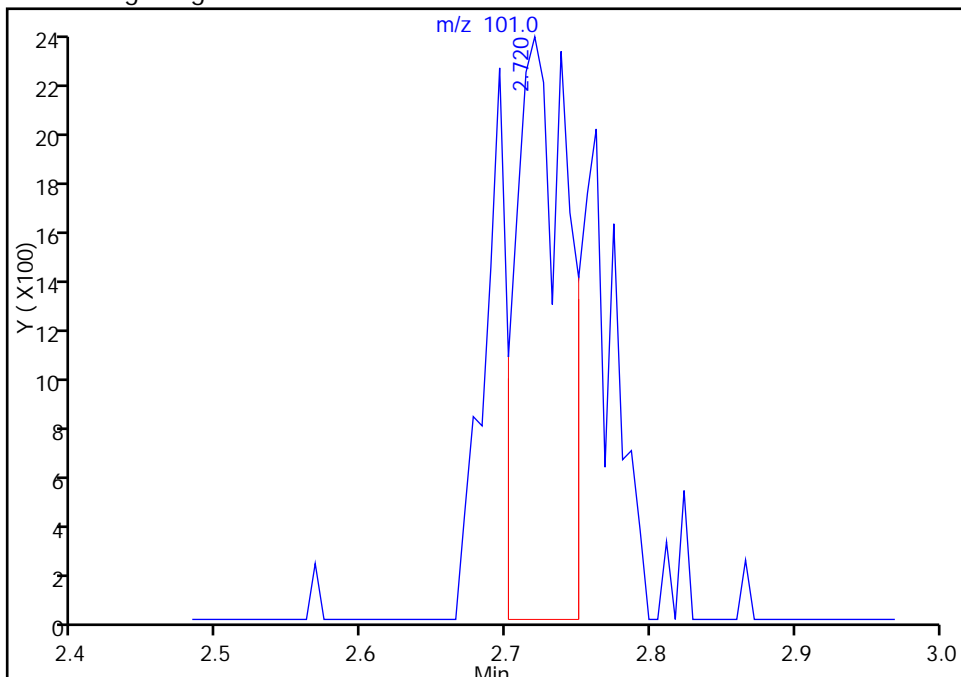
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D  
Injection Date: 15-Dec-2014 14:33:30 Instrument ID: CHHP5  
Lims ID: IC VSTD1  
Client ID:  
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 7  
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

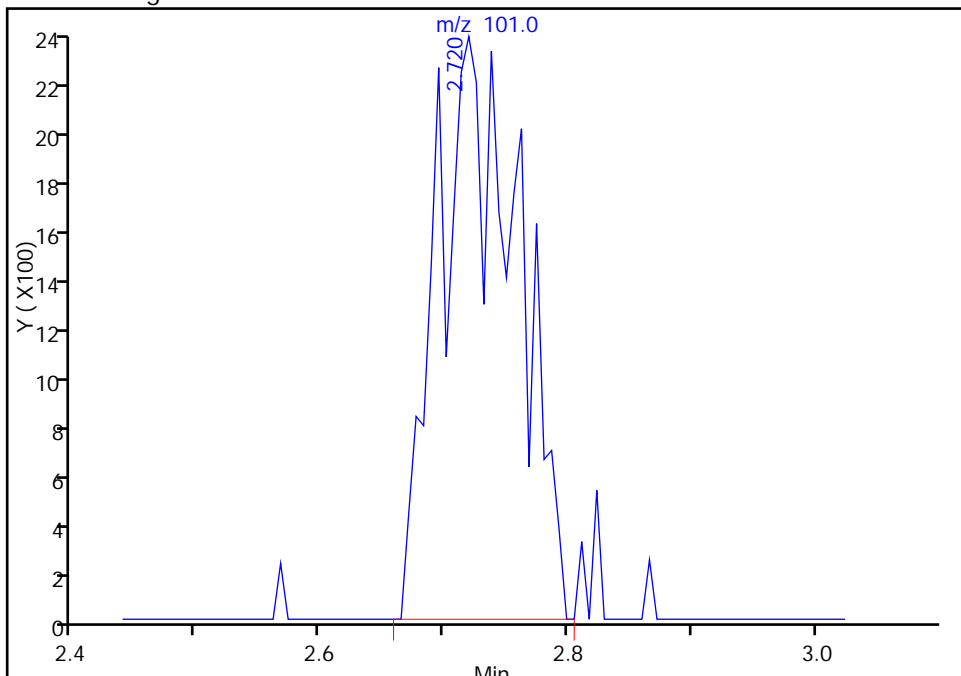
RT: 2.72  
Response: 5956  
Amount: 4.970615

Processing Integration Results



RT: 2.72  
Response: 10889  
Amount: 4.864122

Manual Integration Results



Reviewer: fergusond, 15-Dec-2014 16:41:51  
Audit Action: Manually Integrated  
Audit Reason: Split Peak

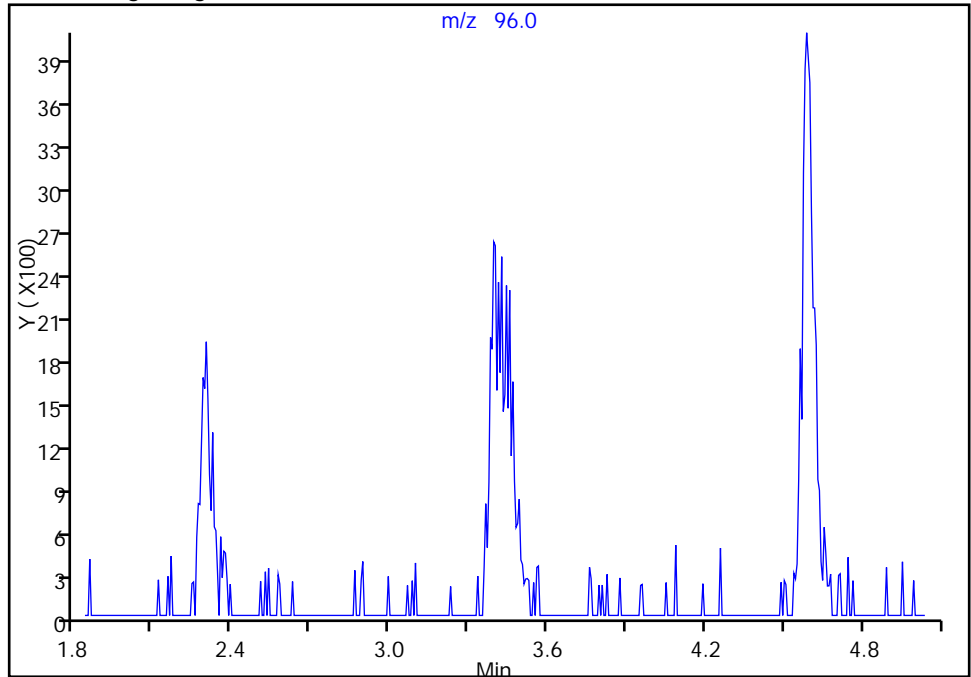
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D  
Injection Date: 15-Dec-2014 14:33:30 Instrument ID: CHHP5  
Lims ID: IC VSTD1  
Client ID:  
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 7  
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

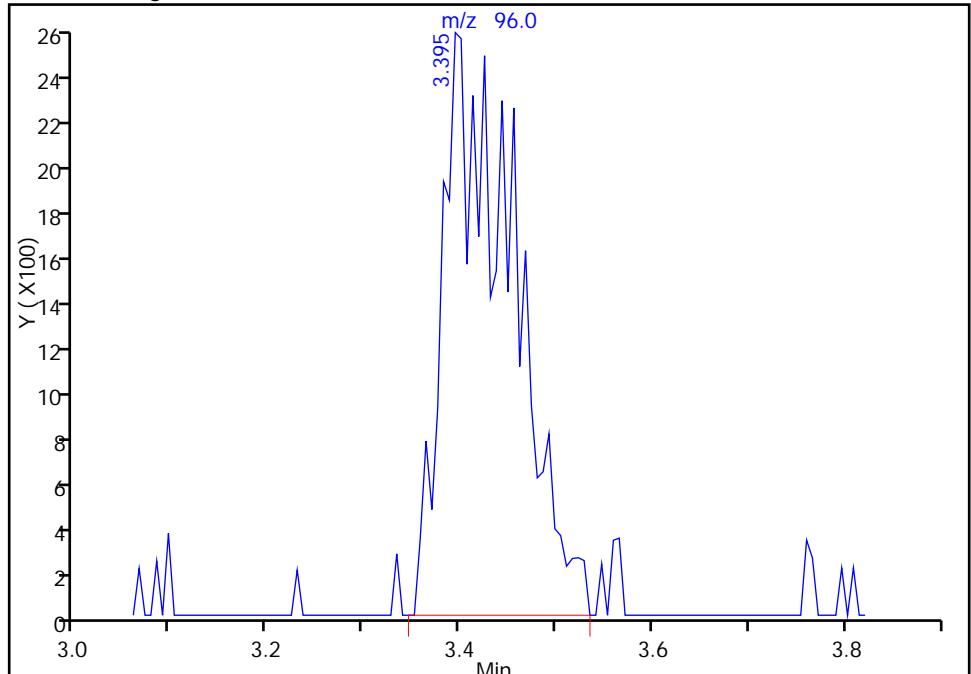
Not Detected  
Expected RT: 3.44

Processing Integration Results



RT: 3.40  
Response: 13078  
Amount: 5.432783

Manual Integration Results



Reviewer: fergusond, 15-Dec-2014 16:41:51  
Audit Action: Manually Integrated  
Audit Reason: Split Peak

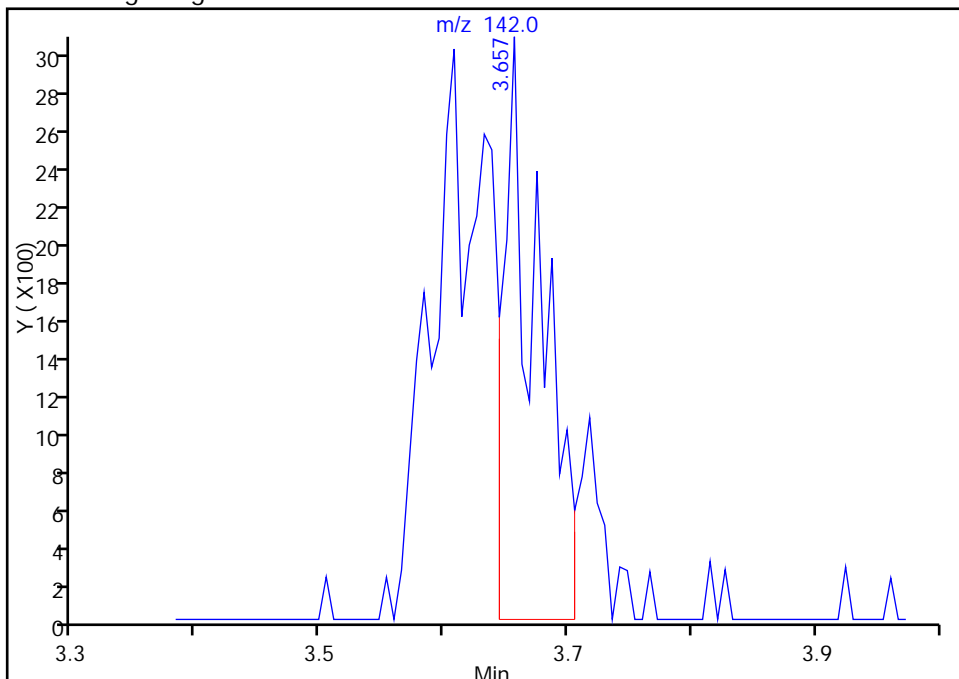
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D  
Injection Date: 15-Dec-2014 14:33:30 Instrument ID: CHHP5  
Lims ID: IC VSTD1  
Client ID:  
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 7  
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

25 Iodomethane, CAS: 74-88-4

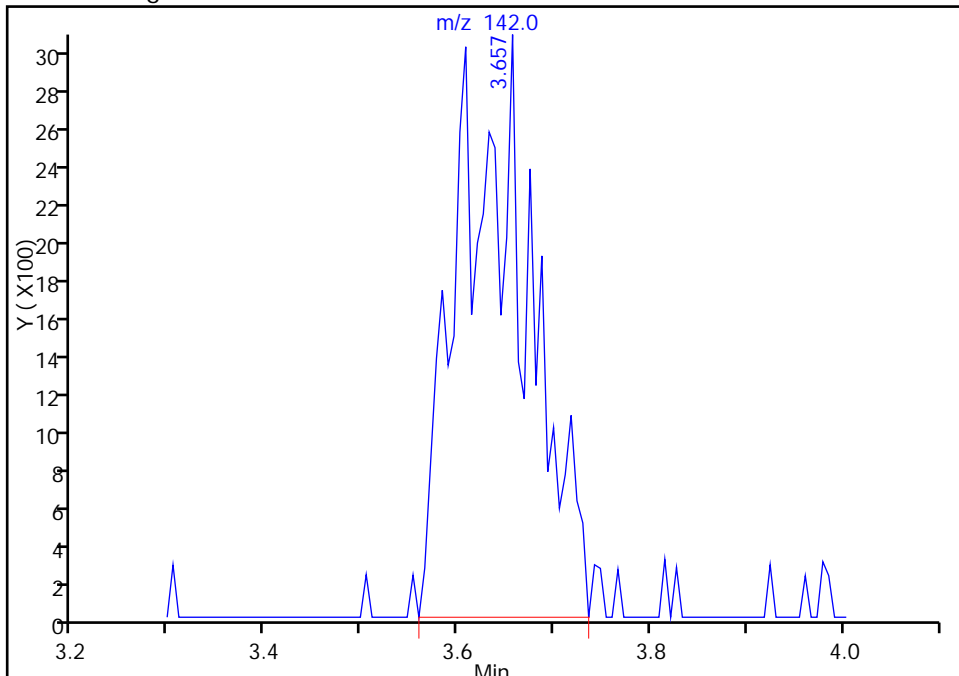
RT: 3.66  
Response: 6167  
Amount: 4.943931

Processing Integration Results



RT: 3.66  
Response: 15672  
Amount: 5.083279

Manual Integration Results



Reviewer: fergusond, 15-Dec-2014 16:41:51  
Audit Action: Manually Integrated  
Audit Reason: Split Peak

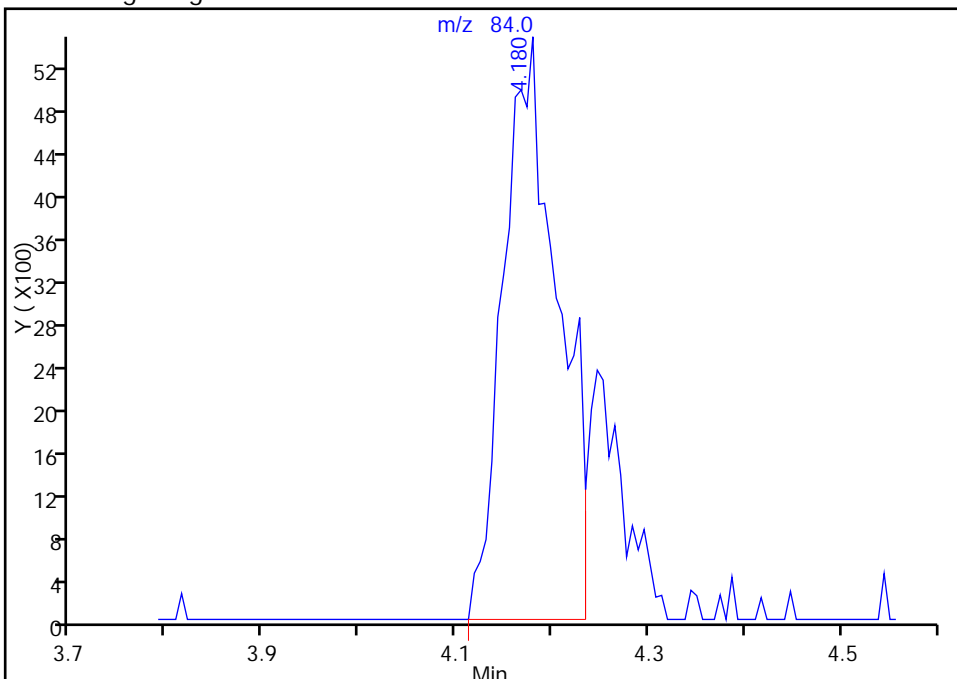
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215007.D  
Injection Date: 15-Dec-2014 14:33:30 Instrument ID: CHHP5  
Lims ID: IC VSTD1  
Client ID:  
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 7  
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

31 Methylene Chloride, CAS: 75-09-2

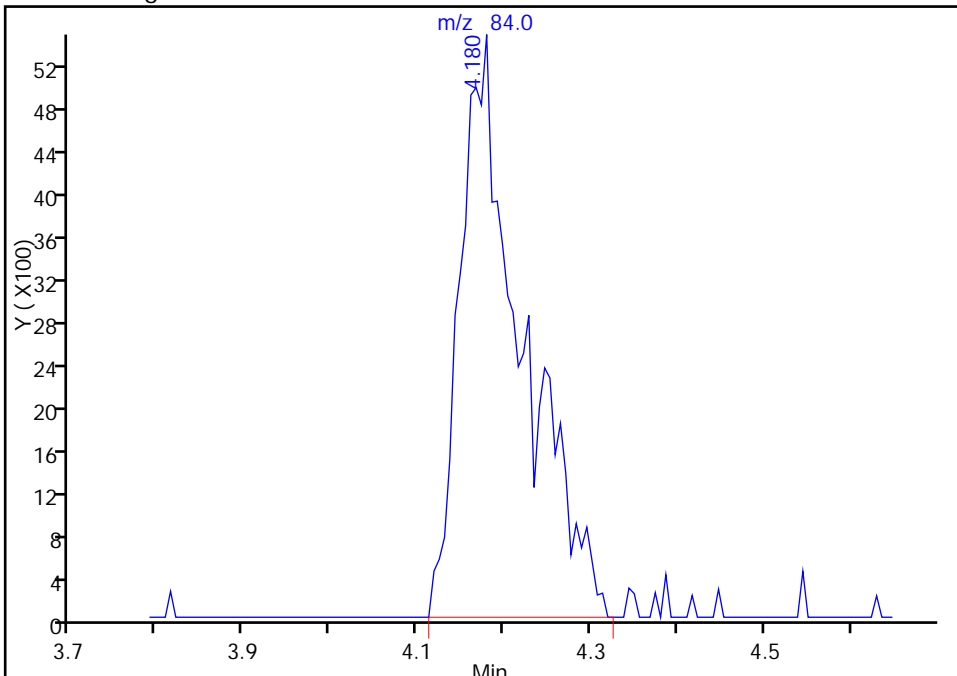
RT: 4.18  
Response: 21609  
Amount: 4.924009

Processing Integration Results



RT: 4.18  
Response: 27156  
Amount: 4.972994

Manual Integration Results



Reviewer: fergusond, 15-Dec-2014 16:41:51  
Audit Action: Manually Integrated  
Audit Reason: Split Peak

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D  
 Lims ID: IC VSTD5  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 15-Dec-2014 14:57:30 ALS Bottle#: 8 Worklist Smp#: 8  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD5  
 Misc. Info.: 180-0004875-008  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 08:51:08 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond

Date: 15-Dec-2014 16:39:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.332	4.336	-0.004	80	160381	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.301	7.298	0.003	95	411882	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.383	0.002	94	89178	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.703	12.707	-0.004	94	128594	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.552	6.556	-0.004	85	47124	25.0	26.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.917	6.921	-0.004	91	75553	25.0	26.2	
\$ 7 Toluene-d8 (Surr)	98	8.943	8.947	-0.004	96	213372	25.0	28.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.553	11.551	0.002	83	76492	25.0	27.1	
11 Dichlorodifluoromethane	85	1.631	1.629	0.002	97	61930	25.0	25.1	
12 Chloromethane	50	1.801	1.799	0.002	99	127605	25.0	26.2	
13 Vinyl chloride	62	1.929	1.927	0.002	98	83604	25.0	25.0	
14 Butadiene	39	1.978	1.975	0.003	97	123895	25.0	26.0	
15 Bromomethane	94	2.288	2.292	-0.004	91	25599	25.0	25.6	M
16 Chloroethane	64	2.446	2.438	0.008	98	41416	25.0	25.0	
17 Dichlorofluoromethane	67	2.689	2.687	0.002	98	86441	25.0	26.2	
18 Trichlorofluoromethane	101	2.738	2.736	0.002	97	50772	25.0	24.3	
20 Ethyl ether	59	3.115	3.113	0.002	93	78240	25.0	26.4	
21 Acrolein	56	3.292	3.289	0.003	99	52294	125.0	117.9	
22 1,1-Dichloroethene	96	3.444	3.435	0.009	92	55204	25.0	24.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.474	3.466	0.008	96	55892	25.0	24.6	
24 Acetone	43	3.523	3.527	-0.004	98	67024	50.0	51.9	
25 Iodomethane	142	3.663	3.667	-0.004	96	70477	25.0	24.5	
26 Carbon disulfide	76	3.699	3.709	-0.010	100	99203	25.0	22.8	
28 3-Chloro-1-propene	76	3.967	3.971	-0.004	87	29594	25.0	23.4	
30 Methyl acetate	43	4.058	4.050	0.008	99	480132	125.0	128.0	
31 Methylene Chloride	84	4.168	4.172	-0.004	90	77498	25.0	26.3	
32 2-Methyl-2-propanol	59	4.466	4.464	0.002	82	53537	250.0	249.7	
33 Acrylonitrile	53	4.581	4.585	-0.004	97	443739	250.0	256.7	
34 trans-1,2-Dichloroethene	96	4.606	4.597	0.009	53	58272	25.0	25.7	
35 Methyl tert-butyl ether	73	4.630	4.622	0.008	89	148333	25.0	25.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.013	5.017	-0.004	95	142088	25.0	24.7	
37 1,1-Dichloroethane	63	5.196	5.200	-0.004	96	137137	25.0	26.0	
38 Vinyl acetate	43	5.330	5.321	0.009	96	126129	25.0	24.9	
44 2,2-Dichloropropane	77	5.944	5.954	-0.010	59	37334	25.0	26.7	
45 cis-1,2-Dichloroethene	96	5.968	5.966	0.002	88	61838	25.0	25.2	
46 2-Butanone (MEK)	43	6.017	6.015	0.002	96	102794	50.0	50.6	
49 Chlorobromomethane	128	6.248	6.246	0.002	80	26193	25.0	25.6	
51 Tetrahydrofuran	42	6.309	6.313	-0.004	92	75527	50.0	48.9	
52 Chloroform	83	6.364	6.362	0.002	97	102224	25.0	25.6	
53 1,1,1-Trichloroethane	97	6.559	6.550	0.009	91	64719	25.0	25.0	
54 Cyclohexane	56	6.607	6.611	-0.004	89	186239	25.0	25.6	
56 Carbon tetrachloride	117	6.735	6.739	-0.004	75	52672	25.0	23.4	
55 1,1-Dichloropropene	75	6.747	6.745	0.002	82	82768	25.0	25.3	
57 Isobutyl alcohol	41	6.966	6.964	0.002	92	69212	625.0	584.9	
58 Benzene	78	6.978	6.982	-0.004	95	270867	25.0	26.6	
59 1,2-Dichloroethane	62	7.009	7.013	-0.004	94	102748	25.0	26.0	
62 n-Heptane	43	7.301	7.298	0.003	91	153997	25.0	26.4	
64 Trichloroethene	130	7.690	7.688	0.002	93	55641	25.0	25.5	
66 Methylcyclohexane	83	7.885	7.882	0.003	93	102702	25.0	24.6	
67 1,2-Dichloropropane	63	7.927	7.925	0.002	94	78759	25.0	25.1	
68 Dibromomethane	93	8.043	8.041	0.002	96	32637	25.0	25.3	
70 1,4-Dioxane	88	8.085	8.077	0.008	86	11752	500.0	501.2	M
71 Dichlorobromomethane	83	8.219	8.217	0.002	94	67146	25.0	25.2	
74 cis-1,3-Dichloropropene	75	8.676	8.679	-0.003	84	69677	25.0	22.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.840	8.844	-0.004	98	204955	50.0	53.2	
76 Toluene	91	9.010	9.008	0.002	97	263797	25.0	27.9	
77 trans-1,3-Dichloropropene	75	9.241	9.239	0.002	91	51858	25.0	23.7	
78 Ethyl methacrylate	69	9.339	9.336	0.003	90	67652	25.0	25.9	
79 1,1,2-Trichloroethane	97	9.424	9.422	0.002	93	51126	25.0	27.5	
80 Tetrachloroethene	164	9.558	9.555	0.003	95	45891	25.0	26.3	
81 1,3-Dichloropropane	76	9.588	9.586	0.002	92	98564	25.0	27.5	
82 2-Hexanone	43	9.673	9.677	-0.004	97	162269	50.0	52.6	
84 Chlorodibromomethane	129	9.807	9.811	-0.004	91	33391	25.0	24.4	
85 Ethylene Dibromide	107	9.929	9.920	0.009	98	46214	25.0	26.8	
86 3-Chlorobenzotrifluoride	180	10.391	10.389	0.002	93	84167	25.0	27.0	
87 Chlorobenzene	112	10.415	10.413	0.002	89	160738	25.0	27.9	
88 4-Chlorobenzotrifluoride	180	10.446	10.450	-0.004	97	79821	25.0	27.4	
89 1,1,1,2-Tetrachloroethane	131	10.488	10.492	-0.004	87	46887	25.0	26.7	
90 Ethylbenzene	106	10.519	10.523	-0.004	98	89754	25.0	27.5	
91 m-Xylene & p-Xylene	106	10.634	10.638	-0.004	97	107568	25.0	27.1	
92 o-Xylene	106	11.030	11.034	-0.004	92	103634	25.0	26.8	
93 Styrene	104	11.042	11.046	-0.004	92	178842	25.0	27.5	
94 Bromoform	173	11.225	11.234	-0.009	94	21578	25.0	25.0	
96 2-Chlorobenzotrifluoride	180	11.291	11.295	-0.004	96	79779	25.0	26.8	
97 Isopropylbenzene	105	11.401	11.399	0.002	97	265627	25.0	27.6	
99 1,1,2,2-Tetrachloroethane	83	11.693	11.691	0.002	95	69587	25.0	26.6	
100 Bromobenzene	156	11.699	11.703	-0.004	95	56843	25.0	24.6	
101 1,2,3-Trichloropropane	110	11.742	11.739	0.003	89	21680	25.0	25.8	
102 trans-1,4-Dichloro-2-buten	53	11.748	11.752	-0.004	64	27704	25.0	24.0	
103 N-Propylbenzene	120	11.809	11.806	0.003	99	71151	25.0	26.1	
104 2-Chlorotoluene	126	11.900	11.898	0.002	94	59697	25.0	25.9	
105 3-Chlorotoluene	126	11.955	11.952	0.003	97	61796	25.0	25.2	

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	11.985	11.983	0.002	95	215352	25.0	26.3	
107 4-Chlorotoluene	126	12.003	12.001	0.002	99	68035	25.0	26.6	
108 tert-Butylbenzene	119	12.307	12.305	0.002	95	173354	25.0	25.8	
110 1,2,4-Trimethylbenzene	105	12.356	12.354	0.002	97	220166	25.0	26.2	
111 1,2-dichloro-4-(trifluorom	214	12.417	12.421	-0.004	97	60194	25.0	26.0	
112 sec-Butylbenzene	105	12.526	12.524	0.002	96	258920	25.0	26.8	
113 1,3-Dichlorobenzene	146	12.642	12.640	0.002	97	116233	25.0	26.6	
114 4-Isopropyltoluene	119	12.672	12.670	0.002	96	204657	25.0	26.3	
115 1,4-Dichlorobenzene	146	12.727	12.725	0.002	90	118712	25.0	26.3	
116 2,4-Dichloro-1-(trifluorom	214	12.776	12.780	-0.004	98	53932	25.0	24.8	
118 2,5-Dichlorobenzotrifluori	214	12.818	12.828	-0.010	98	59666	25.0	25.2	
120 n-Butylbenzene	91	13.080	13.078	0.002	98	183563	25.0	25.8	
121 1,2-Dichlorobenzene	146	13.098	13.102	-0.004	94	102943	25.0	25.4	
122 1,2-Dibromo-3-Chloropropan	75	13.883	13.881	0.002	70	7760	25.0	21.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.029	14.027	0.002	98	193870	75.0	75.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.443	14.447	-0.004	99	118844	50.0	48.8	
126 1,2,4-Trichlorobenzene	180	14.710	14.708	0.002	93	40187	25.0	23.9	
127 Hexachlorobutadiene	225	14.875	14.885	-0.010	95	21572	25.0	27.1	
128 Naphthalene	128	14.960	14.964	-0.004	97	104700	25.0	23.3	
129 1,2,3-Trichlorobenzene	180	15.197	15.207	-0.010	92	33314	25.0	25.3	
131 2,4,5-Trichlorotoluene	159	15.982	15.980	0.002	94	12992	25.0	23.2	
130 2,3,6-Trichlorotoluene	159	16.079	16.077	0.002	93	11506	25.0	22.4	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-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		50.0	50.8	
S 133 Xylenes, Total	106				0		50.0	53.9	
S 135 1,3-Dichloropropene, Total	1				0		50.0	46.5	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOAACROPRI_00004	Amount Added: 5.00	Units: uL	
VOA8260SURRE_00028	Amount Added: 1.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added: 1.00	Units: uL	
voaWEEpri Res_00001	Amount Added: 1.00	Units: uL	
voaWKet2ndRes_00005	Amount Added: 1.00	Units: uL	
voaWVA pri Re_00005	Amount Added: 1.00	Units: uL	
VOA8260INT_00026	Amount Added: 2.00	Units: uL	Run Reagent



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D

Injection Date: 15-Dec-2014 14:57:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD5

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

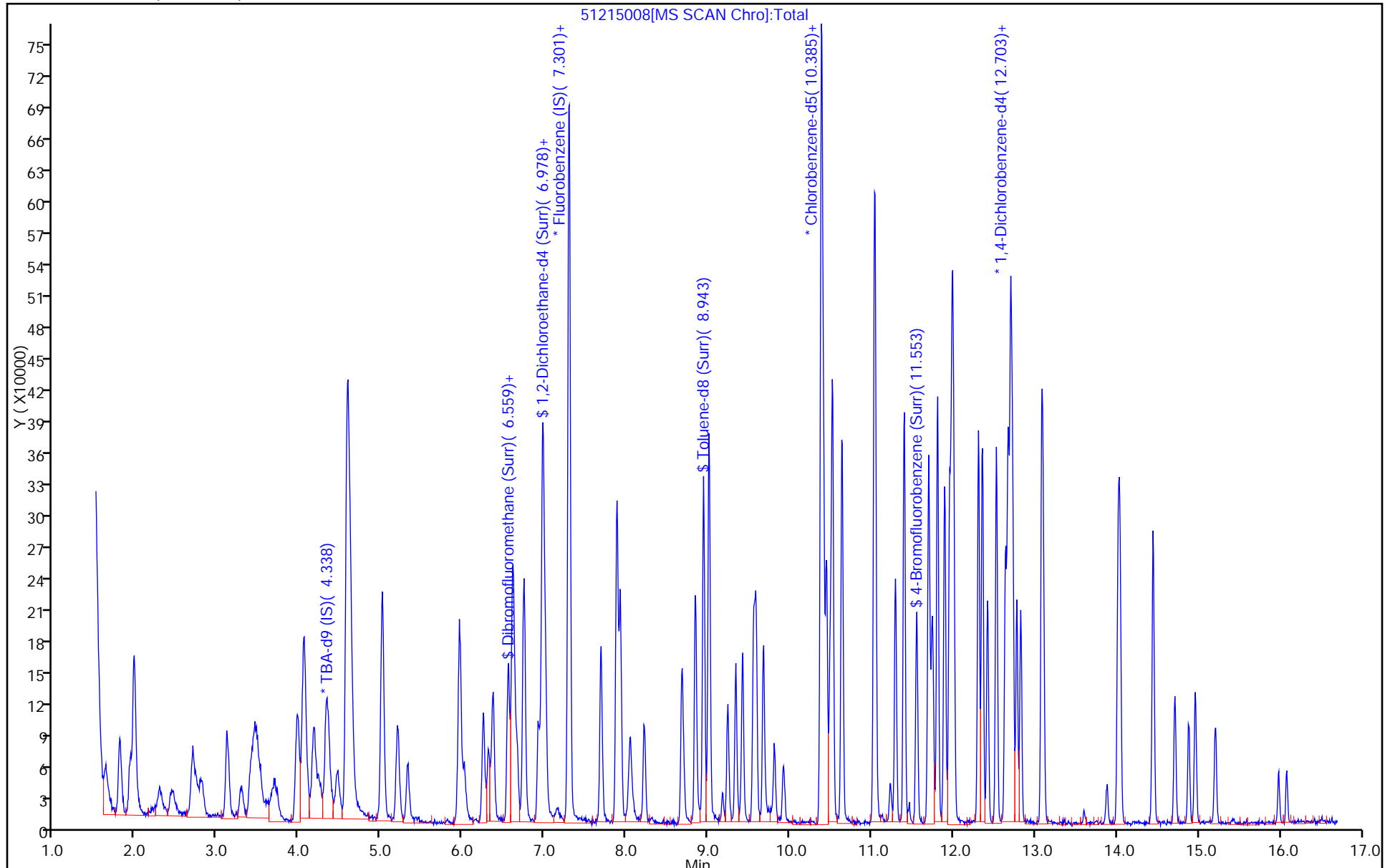
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



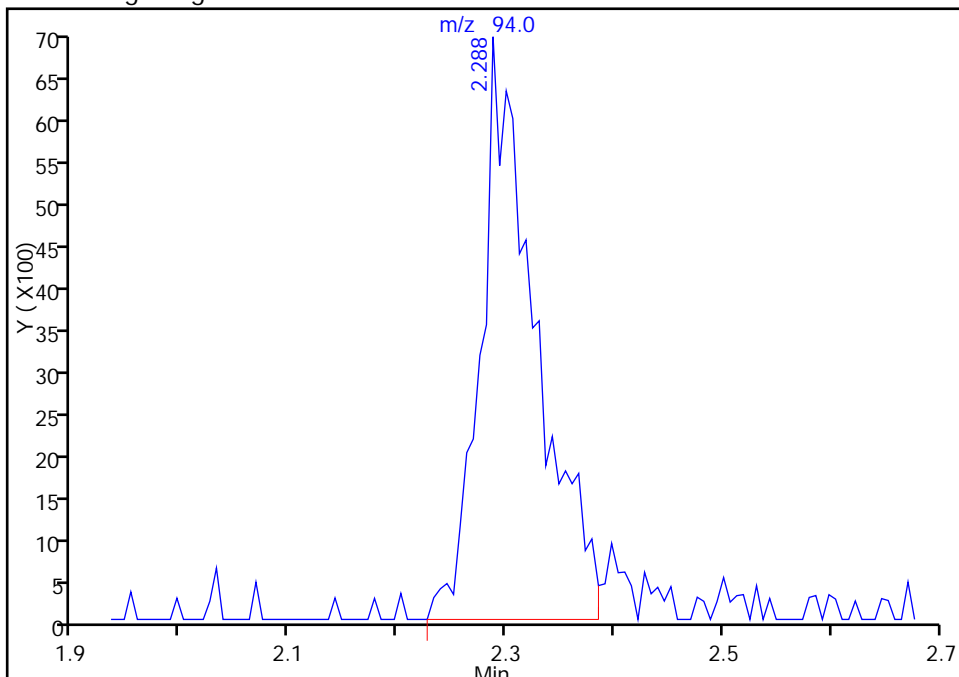
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D  
Injection Date: 15-Dec-2014 14:57:30 Instrument ID: CHHP5  
Lims ID: IC VSTD5  
Client ID:  
Operator ID: 001562 ALS Bottle#: 8 Worklist Smp#: 8  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

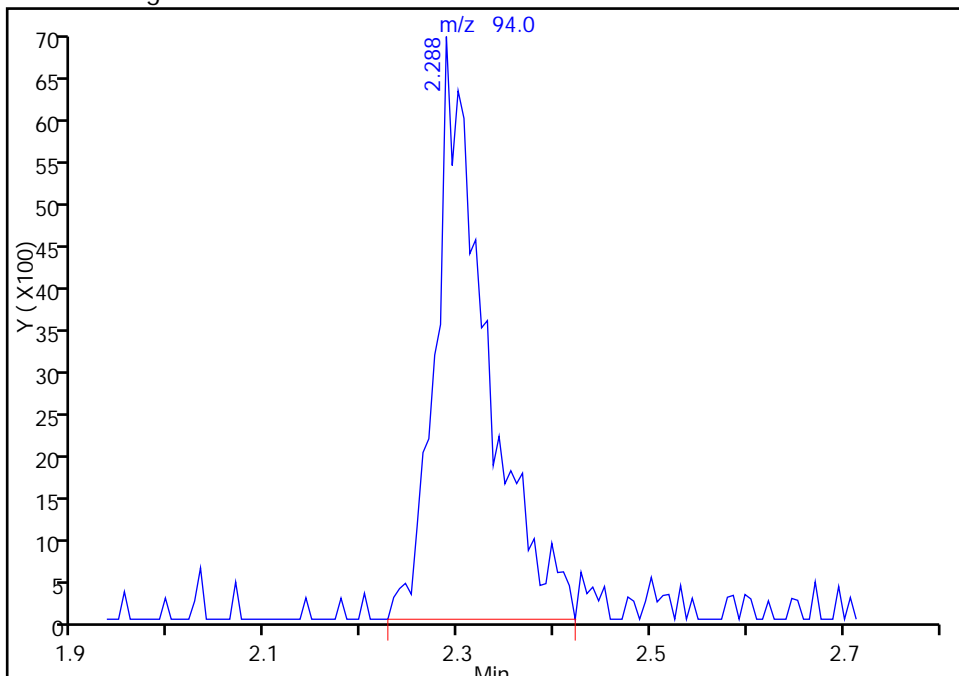
RT: 2.29  
Response: 24550  
Amount: 23.957816

Processing Integration Results



RT: 2.29  
Response: 25599  
Amount: 25.586392

Manual Integration Results



Reviewer: fergusond, 15-Dec-2014 16:39:14  
Audit Action: Manually Integrated  
Audit Reason: Peak Tail

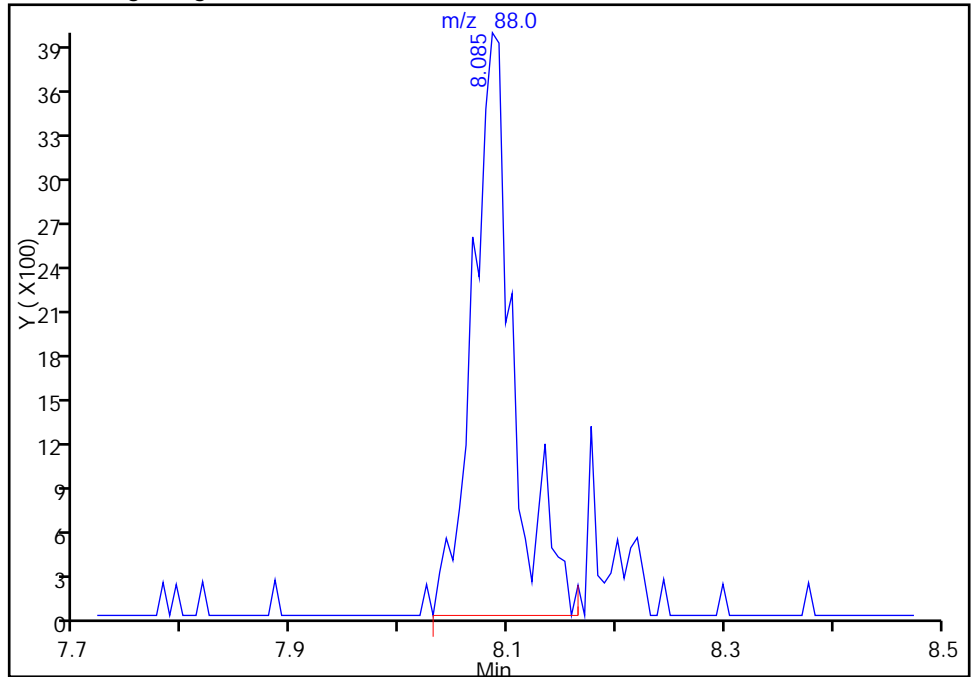
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215008.D  
Injection Date: 15-Dec-2014 14:57:30 Instrument ID: CHHP5  
Lims ID: IC VSTD5  
Client ID:  
Operator ID: 001562 ALS Bottle#: 8 Worklist Smp#: 8  
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

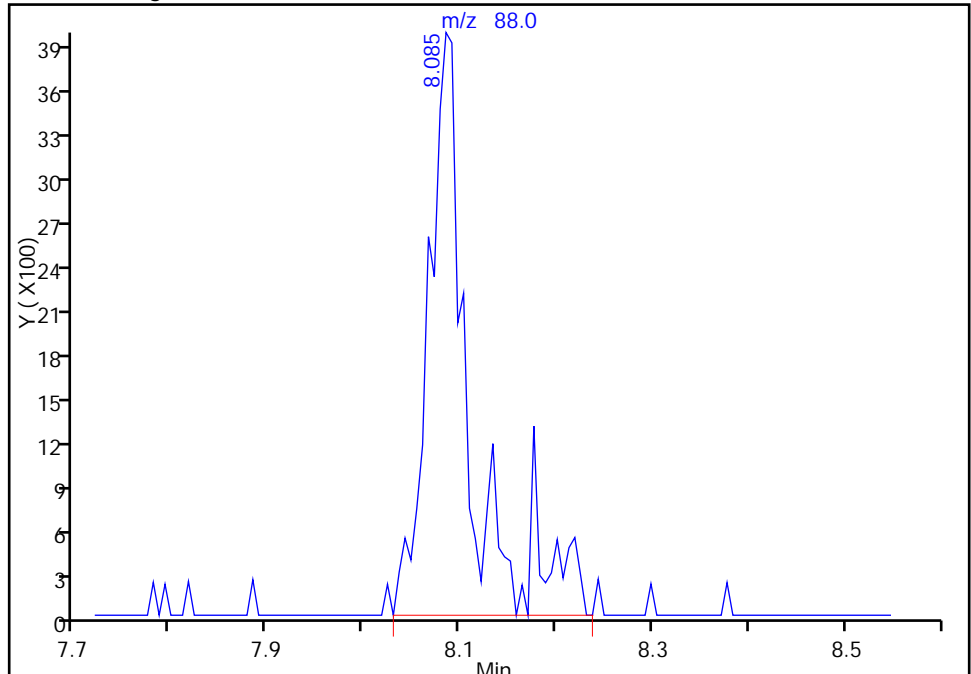
RT: 8.09  
Response: 10263  
Amount: 448.5612

Processing Integration Results



RT: 8.09  
Response: 11752  
Amount: 501.1712

Manual Integration Results



Reviewer: fergusond, 16-Dec-2014 08:50:35  
Audit Action: Manually Integrated  
Audit Reason: Peak Tail

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215009.D  
 Lims ID: ICIS VSTD10  
 Client ID:  
 Sample Type: ICIS Calib Level: 3  
 Inject. Date: 15-Dec-2014 15:21:30 ALS Bottle#: 9 Worklist Smp#: 9  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: ICIS VSTD10  
 Misc. Info.: 180-0004875-009  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 09:09:29 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond

Date: 16-Dec-2014 09:09:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.338	4.338	0.000	79	164744	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.295	7.295	0.000	96	423804	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.385	10.385	0.000	93	98015	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.709	12.709	0.000	95	133910	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.552	6.552	0.000	85	94689	50.0	52.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.924	6.924	0.000	92	153750	50.0	51.9	
\$ 7 Toluene-d8 (Surr)	98	8.943	8.943	0.000	96	436152	50.0	53.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.553	11.553	0.000	84	163066	50.0	52.5	
11 Dichlorodifluoromethane	85	1.643	1.643	0.000	99	131229	50.0	51.6	
12 Chloromethane	50	1.807	1.807	0.000	99	247505	50.0	49.4	
13 Vinyl chloride	62	1.929	1.929	0.000	98	166505	50.0	48.4	
14 Butadiene	39	1.984	1.984	0.000	96	249438	50.0	50.9	
15 Bromomethane	94	2.294	2.294	0.000	92	49618	50.0	48.2	
16 Chloroethane	64	2.434	2.434	0.000	97	84692	50.0	49.7	
17 Dichlorofluoromethane	67	2.689	2.689	0.000	95	166568	50.0	49.1	
18 Trichlorofluoromethane	101	2.738	2.738	0.000	97	103060	50.0	48.0	
20 Ethyl ether	59	3.115	3.115	0.000	95	149984	50.0	49.1	
21 Acrolein	56	3.286	3.286	0.000	98	67959	150.0	148.9	M
22 1,1-Dichloroethene	96	3.444	3.444	0.000	93	116523	50.0	50.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.486	3.486	0.000	95	114250	50.0	48.9	
24 Acetone	43	3.535	3.535	0.000	97	136052	100.0	102.4	
25 Iodomethane	142	3.669	3.669	0.000	96	146806	50.0	49.7	
26 Carbon disulfide	76	3.718	3.718	0.000	99	203932	50.0	45.6	
28 3-Chloro-1-propene	76	3.979	3.979	0.000	88	62463	50.0	47.9	
30 Methyl acetate	43	4.052	4.052	0.000	100	971398	250.0	251.7	
31 Methylene Chloride	84	4.174	4.174	0.000	90	137628	50.0	49.2	
32 2-Methyl-2-propanol	59	4.466	4.466	0.000	84	112567	500.0	511.1	
33 Acrylonitrile	53	4.581	4.581	0.000	98	902499	500.0	507.5	
34 trans-1,2-Dichloroethene	96	4.594	4.594	0.000	89	117057	50.0	50.1	
35 Methyl tert-butyl ether	73	4.630	4.630	0.000	87	290628	50.0	48.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.019	5.019	0.000	97	290414	50.0	49.1	
37 1,1-Dichloroethane	63	5.202	5.202	0.000	97	275718	50.0	50.7	
38 Vinyl acetate	43	5.324	5.324	0.000	97	252355	50.0	48.4	
44 2,2-Dichloropropane	77	5.956	5.956	0.000	64	73219	50.0	50.8	
45 cis-1,2-Dichloroethene	96	5.968	5.968	0.000	88	124677	50.0	49.3	
46 2-Butanone (MEK)	43	6.017	6.017	0.000	96	201478	100.0	96.4	
49 Chlorobromomethane	128	6.254	6.254	0.000	81	52609	50.0	49.9	
51 Tetrahydrofuran	42	6.309	6.309	0.000	92	154760	100.0	97.3	
52 Chloroform	83	6.370	6.370	0.000	96	203645	50.0	49.5	
53 1,1,1-Trichloroethane	97	6.559	6.559	0.000	92	128898	50.0	48.3	
54 Cyclohexane	56	6.613	6.613	0.000	91	380610	50.0	50.8	
56 Carbon tetrachloride	117	6.741	6.741	0.000	94	115997	50.0	50.1	
55 1,1-Dichloropropene	75	6.747	6.747	0.000	85	169491	50.0	50.4	
57 Isobutyl alcohol	41	6.960	6.960	0.000	75	134692	1250.0	1106.3	
58 Benzene	78	6.978	6.978	0.000	95	522828	50.0	49.9	
59 1,2-Dichloroethane	62	7.009	7.009	0.000	95	208535	50.0	51.2	
62 n-Heptane	43	7.301	7.301	0.000	96	302184	50.0	50.4	
64 Trichloroethene	130	7.690	7.690	0.000	95	116274	50.0	51.8	
66 Methylcyclohexane	83	7.885	7.885	0.000	93	219487	50.0	51.1	
67 1,2-Dichloropropane	63	7.921	7.921	0.000	95	162350	50.0	50.3	
68 Dibromomethane	93	8.043	8.043	0.000	98	66098	50.0	49.7	
70 1,4-Dioxane	88	8.085	8.085	0.000	92	25491	1000.0	1056.5	
71 Dichlorobromomethane	83	8.219	8.219	0.000	95	132486	50.0	48.3	
74 cis-1,3-Dichloropropene	75	8.682	8.682	0.000	85	151006	50.0	48.2	
75 4-Methyl-2-pentanone (MIBK)	43	8.846	8.846	0.000	98	427228	100.0	100.9	
76 Toluene	91	9.010	9.010	0.000	96	534952	50.0	51.4	
77 trans-1,3-Dichloropropene	75	9.235	9.235	0.000	93	115007	50.0	47.7	
78 Ethyl methacrylate	69	9.339	9.339	0.000	89	140983	50.0	49.1	
79 1,1,2-Trichloroethane	97	9.424	9.424	0.000	94	99708	50.0	48.8	
80 Tetrachloroethene	164	9.558	9.558	0.000	94	96447	50.0	50.3	
81 1,3-Dichloropropane	76	9.588	9.588	0.000	92	193960	50.0	49.3	
82 2-Hexanone	43	9.673	9.673	0.000	96	355030	100.0	104.8	
84 Chlorodibromomethane	129	9.807	9.807	0.000	89	74703	50.0	49.8	
85 Ethylene Dibromide	107	9.923	9.923	0.000	98	96348	50.0	50.9	
86 3-Chlorobenzotrifluoride	180	10.391	10.391	0.000	93	183531	50.0	53.6	
87 Chlorobenzene	112	10.415	10.415	0.000	91	323152	50.0	51.1	
88 4-Chlorobenzotrifluoride	180	10.446	10.446	0.000	96	169416	50.0	53.0	
89 1,1,1,2-Tetrachloroethane	131	10.495	10.495	0.000	89	94003	50.0	48.7	
90 Ethylbenzene	106	10.525	10.525	0.000	98	182469	50.0	50.9	
91 m-Xylene & p-Xylene	106	10.641	10.641	0.000	97	223210	50.0	51.1	
92 o-Xylene	106	11.030	11.030	0.000	98	220291	50.0	51.9	
93 Styrene	104	11.042	11.042	0.000	91	364481	50.0	51.0	
94 Bromoform	173	11.231	11.231	0.000	95	42875	50.0	45.2	
96 2-Chlorobenzotrifluoride	180	11.291	11.291	0.000	95	173668	50.0	53.1	
97 Isopropylbenzene	105	11.395	11.395	0.000	97	551045	50.0	52.1	
99 1,1,2,2-Tetrachloroethane	83	11.693	11.693	0.000	94	149203	50.0	52.0	
100 Bromobenzene	156	11.705	11.705	0.000	96	121949	50.0	50.6	
101 1,2,3-Trichloropropane	110	11.742	11.742	0.000	90	43578	50.0	49.7	
102 trans-1,4-Dichloro-2-buten	53	11.748	11.748	0.000	65	57235	50.0	47.6	
103 N-Propylbenzene	120	11.809	11.809	0.000	99	146805	50.0	51.6	
104 2-Chlorotoluene	126	11.894	11.894	0.000	94	120100	50.0	50.1	
105 3-Chlorotoluene	126	11.955	11.955	0.000	97	137425	50.0	53.7	

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	11.985	11.985	0.000	94	457058	50.0	53.6	
107 4-Chlorotoluene	126	12.003	12.003	0.000	99	138608	50.0	52.0	
108 tert-Butylbenzene	119	12.307	12.307	0.000	95	370100	50.0	52.9	
110 1,2,4-Trimethylbenzene	105	12.356	12.356	0.000	99	465575	50.0	53.2	
111 1,2-dichloro-4-(trifluorom	214	12.417	12.417	0.000	98	130684	50.0	54.2	
112 sec-Butylbenzene	105	12.526	12.526	0.000	96	534748	50.0	53.1	
113 1,3-Dichlorobenzene	146	12.642	12.642	0.000	96	232561	50.0	51.1	
114 4-Isopropyltoluene	119	12.672	12.672	0.000	97	427869	50.0	52.7	
115 1,4-Dichlorobenzene	146	12.727	12.727	0.000	93	242307	50.0	51.6	
116 2,4-Dichloro-1-(trifluorom	214	12.776	12.776	0.000	98	118794	50.0	52.5	
118 2,5-Dichlorobenzotrifluori	214	12.831	12.831	0.000	98	134654	50.0	54.5	
120 n-Butylbenzene	91	13.080	13.080	0.000	98	393872	50.0	53.1	
121 1,2-Dichlorobenzene	146	13.104	13.104	0.000	95	212701	50.0	50.4	
122 1,2-Dibromo-3-Chloropropan	75	13.883	13.883	0.000	68	19807	50.0	51.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.029	14.029	0.000	98	444038	150.0	167.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.443	14.443	0.000	98	274221	100.0	108.1	
126 1,2,4-Trichlorobenzene	180	14.710	14.710	0.000	94	93933	50.0	53.7	
127 Hexachlorobutadiene	225	14.881	14.881	0.000	95	42898	50.0	51.7	
128 Naphthalene	128	14.960	14.960	0.000	97	242621	50.0	51.9	
129 1,2,3-Trichlorobenzene	180	15.209	15.209	0.000	93	70246	50.0	51.2	
131 2,4,5-Trichlorotoluene	159	15.982	15.982	0.000	96	30153	50.0	51.7	
130 2,3,6-Trichlorotoluene	159	16.079	16.079	0.000	95	28614	50.0	53.6	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-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	99.4	
S 133 Xylenes, Total	106				0		100.0	103.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	95.9	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOAACROPRI_00004	Amount Added: 6.00	Units: uL	
VOA8260SURR_00028	Amount Added: 2.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added: 2.00	Units: uL	
voaWEEpri Res_00001	Amount Added: 2.00	Units: uL	
voaWKet2ndRes_00005	Amount Added: 2.00	Units: uL	
voaWVA pri Re_00005	Amount Added: 2.00	Units: uL	
VOA8260INT_00026	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215009.D

Injection Date: 15-Dec-2014 15:21:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: ICIS VSTD10

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

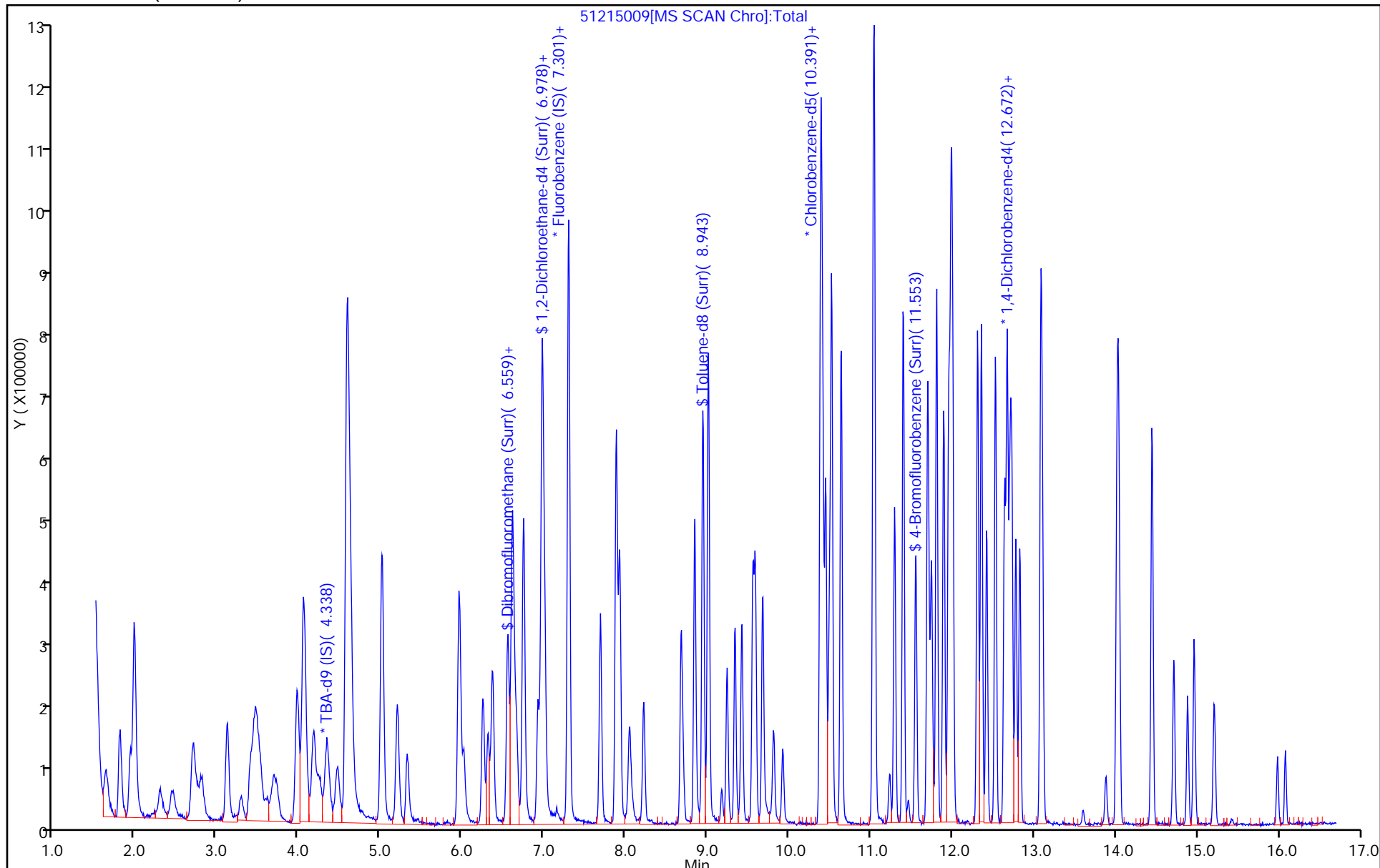
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



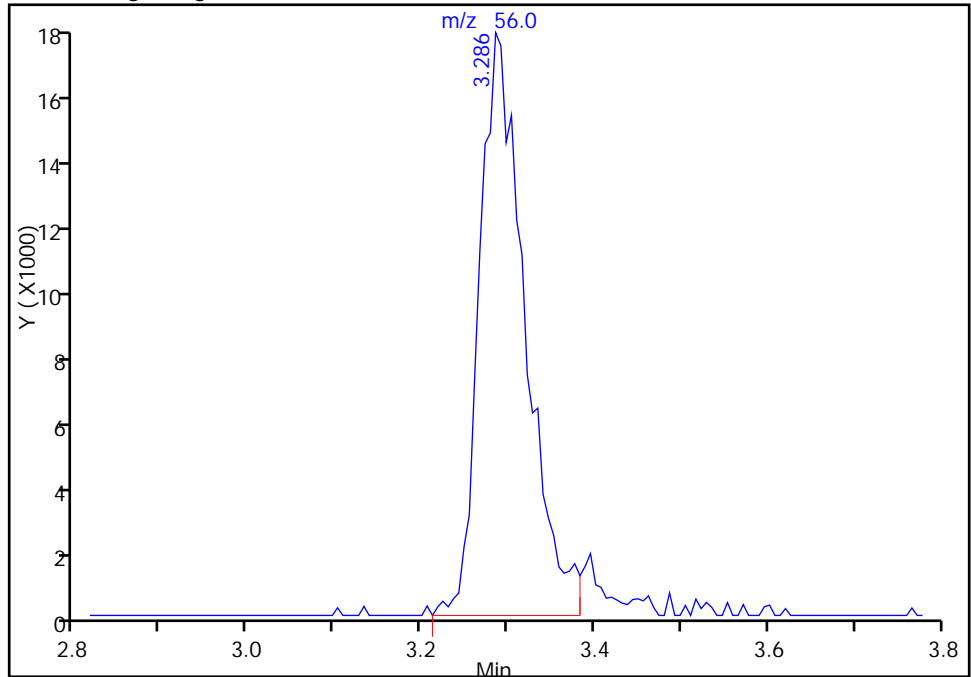
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215009.D  
Injection Date: 15-Dec-2014 15:21:30 Instrument ID: CHHP5  
Lims ID: ICIS VSTD10  
Client ID:  
Operator ID: 001562 ALS Bottle#: 9 Worklist Smp#: 9  
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

21 Acrolein, CAS: 107-02-8

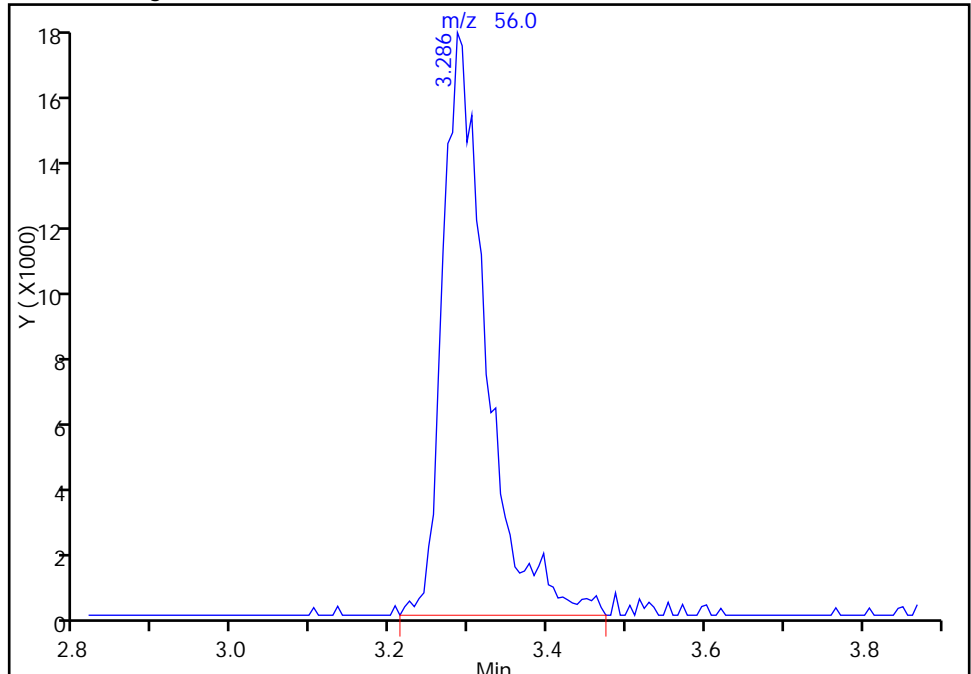
RT: 3.29  
Response: 64457  
Amount: 145.1414

Processing Integration Results



RT: 3.29  
Response: 67959  
Amount: 148.8827

Manual Integration Results



Reviewer: fergusond, 15-Dec-2014 16:37:14  
Audit Action: Manually Integrated  
Audit Reason: Peak Tail



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215010.D  
 Lims ID: IC VSTD15  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 15-Dec-2014 15:45:30 ALS Bottle#: 10 Worklist Smp#: 10  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD15  
 Misc. Info.: 180-0004875-010  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 08:51:12 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond

Date: 15-Dec-2014 16:42:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.336	4.336	0.000	83	181242	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.298	7.298	0.000	97	442943	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.383	10.383	0.000	94	107266	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.707	12.707	0.000	94	140981	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.556	6.556	0.000	82	138420	75.0	73.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.921	6.921	0.000	91	221449	75.0	71.5	
\$ 7 Toluene-d8 (Surr)	98	8.947	8.947	0.000	96	616248	75.0	69.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.551	11.551	0.000	84	234795	75.0	69.1	
11 Dichlorodifluoromethane	85	1.629	1.629	0.000	98	190564	75.0	71.7	
12 Chloromethane	50	1.799	1.799	0.000	99	371573	75.0	70.9	
13 Vinyl chloride	62	1.927	1.927	0.000	97	253937	75.0	70.6	
14 Butadiene	39	1.975	1.975	0.000	99	348720	75.0	68.1	
15 Bromomethane	94	2.292	2.292	0.000	92	79919	75.0	74.3	
16 Chloroethane	64	2.438	2.438	0.000	97	127211	75.0	71.4	
17 Dichlorofluoromethane	67	2.687	2.687	0.000	97	259364	75.0	73.2	
18 Trichlorofluoromethane	101	2.736	2.736	0.000	96	158442	75.0	70.6	
20 Ethyl ether	59	3.113	3.113	0.000	95	225291	75.0	70.6	
21 Acrolein	56	3.289	3.289	0.000	99	83110	175.0	174.2	
22 1,1-Dichloroethene	96	3.435	3.435	0.000	91	170252	75.0	70.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.466	3.466	0.000	95	168083	75.0	68.8	
24 Acetone	43	3.527	3.527	0.000	98	197095	150.0	141.9	
25 Iodomethane	142	3.667	3.667	0.000	96	219902	75.0	71.2	
26 Carbon disulfide	76	3.709	3.709	0.000	100	319940	75.0	68.4	
28 3-Chloro-1-propene	76	3.971	3.971	0.000	87	98218	75.0	72.1	
30 Methyl acetate	43	4.050	4.050	0.000	100	1479687	375.0	366.9	
31 Methylene Chloride	84	4.172	4.172	0.000	90	204036	75.0	72.0	
32 2-Methyl-2-propanol	59	4.464	4.464	0.000	83	171520	750.0	707.9	
33 Acrylonitrile	53	4.585	4.585	0.000	99	1369178	750.0	736.6	
34 trans-1,2-Dichloroethene	96	4.597	4.597	0.000	92	179704	75.0	73.6	
35 Methyl tert-butyl ether	73	4.622	4.622	0.000	88	452968	75.0	71.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.017	5.017	0.000	97	429042	75.0	69.4	
37 1,1-Dichloroethane	63	5.200	5.200	0.000	97	421630	75.0	74.2	
38 Vinyl acetate	43	5.321	5.321	0.000	96	391840	75.0	71.9	
44 2,2-Dichloropropane	77	5.954	5.954	0.000	54	106300	75.0	70.6	
45 cis-1,2-Dichloroethene	96	5.966	5.966	0.000	88	192115	75.0	72.8	
46 2-Butanone (MEK)	43	6.015	6.015	0.000	96	310437	150.0	142.1	
49 Chlorobromomethane	128	6.246	6.246	0.000	82	82921	75.0	75.3	
51 Tetrahydrofuran	42	6.313	6.313	0.000	93	229135	150.0	137.9	
52 Chloroform	83	6.362	6.362	0.000	95	312586	75.0	72.8	
53 1,1,1-Trichloroethane	97	6.550	6.550	0.000	92	205239	75.0	73.6	
54 Cyclohexane	56	6.611	6.611	0.000	93	568225	75.0	72.5	
56 Carbon tetrachloride	117	6.739	6.739	0.000	91	174921	75.0	72.3	
55 1,1-Dichloropropene	75	6.745	6.745	0.000	85	247738	75.0	70.4	
57 Isobutyl alcohol	41	6.964	6.964	0.000	67	224509	1875.0	1764.4	
58 Benzene	78	6.982	6.982	0.000	94	792783	75.0	72.4	
59 1,2-Dichloroethane	62	7.013	7.013	0.000	95	315981	75.0	74.3	
62 n-Heptane	43	7.298	7.298	0.000	96	437674	75.0	69.8	
64 Trichloroethene	130	7.688	7.688	0.000	94	168085	75.0	71.7	
66 Methylcyclohexane	83	7.882	7.882	0.000	94	327984	75.0	73.1	
67 1,2-Dichloropropane	63	7.925	7.925	0.000	96	251775	75.0	74.7	
68 Dibromomethane	93	8.041	8.041	0.000	96	101536	75.0	73.1	
70 1,4-Dioxane	88	8.077	8.077	0.000	90	40031	1500.0	1587.4	
71 Dichlorobromomethane	83	8.217	8.217	0.000	94	209313	75.0	73.0	
74 cis-1,3-Dichloropropene	75	8.679	8.679	0.000	84	248192	75.0	75.8	
75 4-Methyl-2-pentanone (MIBK)	43	8.844	8.844	0.000	98	691017	150.0	149.2	
76 Toluene	91	9.008	9.008	0.000	96	824691	75.0	72.4	
77 trans-1,3-Dichloropropene	75	9.239	9.239	0.000	92	193036	75.0	73.2	
78 Ethyl methacrylate	69	9.336	9.336	0.000	89	233054	75.0	74.2	
79 1,1,2-Trichloroethane	97	9.422	9.422	0.000	94	160928	75.0	72.0	
80 Tetrachloroethene	164	9.555	9.555	0.000	94	145626	75.0	69.3	
81 1,3-Dichloropropane	76	9.586	9.586	0.000	94	312441	75.0	72.6	
82 2-Hexanone	43	9.677	9.677	0.000	98	556468	150.0	150.0	
84 Chlorodibromomethane	129	9.811	9.811	0.000	88	124399	75.0	75.7	
85 Ethylene Dibromide	107	9.920	9.920	0.000	97	149545	75.0	72.2	
86 3-Chlorobenzotrifluoride	180	10.389	10.389	0.000	94	249882	75.0	66.7	
87 Chlorobenzene	112	10.413	10.413	0.000	89	487195	75.0	70.3	
88 4-Chlorobenzotrifluoride	180	10.450	10.450	0.000	96	241146	75.0	68.9	
89 1,1,1,2-Tetrachloroethane	131	10.492	10.492	0.000	90	149698	75.0	70.8	
90 Ethylbenzene	106	10.523	10.523	0.000	98	281017	75.0	71.7	
91 m-Xylene & p-Xylene	106	10.638	10.638	0.000	97	347010	75.0	72.6	
92 o-Xylene	106	11.034	11.034	0.000	94	332078	75.0	71.5	
93 Styrene	104	11.046	11.046	0.000	86	566334	75.0	72.5	
94 Bromoform	173	11.234	11.234	0.000	95	74265	75.0	71.5	
96 2-Chlorobenzotrifluoride	180	11.295	11.295	0.000	95	239775	75.0	66.9	
97 Isopropylbenzene	105	11.399	11.399	0.000	97	824955	75.0	71.2	
99 1,1,2,2-Tetrachloroethane	83	11.691	11.691	0.000	94	225157	75.0	71.7	
100 Bromobenzene	156	11.703	11.703	0.000	96	188616	75.0	74.4	
101 1,2,3-Trichloropropane	110	11.739	11.739	0.000	91	67651	75.0	73.4	
102 trans-1,4-Dichloro-2-buten	53	11.752	11.752	0.000	72	93980	75.0	74.2	
103 N-Propylbenzene	120	11.806	11.806	0.000	99	218494	75.0	73.0	
104 2-Chlorotoluene	126	11.898	11.898	0.000	94	191792	75.0	75.9	
105 3-Chlorotoluene	126	11.952	11.952	0.000	96	188584	75.0	70.0	

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	11.983	11.983	0.000	94	665788	75.0	74.2	
107 4-Chlorotoluene	126	12.001	12.001	0.000	99	213085	75.0	75.9	
108 tert-Butylbenzene	119	12.305	12.305	0.000	94	537092	75.0	73.0	
110 1,2,4-Trimethylbenzene	105	12.354	12.354	0.000	97	688660	75.0	74.7	
111 1,2-dichloro-4-(trifluorom	214	12.421	12.421	0.000	97	180560	75.0	71.1	
112 sec-Butylbenzene	105	12.524	12.524	0.000	96	773895	75.0	73.0	
113 1,3-Dichlorobenzene	146	12.640	12.640	0.000	95	345748	75.0	72.2	
114 4-Isopropyltoluene	119	12.670	12.670	0.000	97	634008	75.0	74.2	
115 1,4-Dichlorobenzene	146	12.725	12.725	0.000	91	352959	75.0	71.4	
116 2,4-Dichloro-1-(trifluorom	214	12.780	12.780	0.000	98	167750	75.0	70.4	
118 2,5-Dichlorobenzotrifluori	214	12.828	12.828	0.000	97	181592	75.0	69.9	
120 n-Butylbenzene	91	13.078	13.078	0.000	98	555780	75.0	71.2	
121 1,2-Dichlorobenzene	146	13.102	13.102	0.000	95	323846	75.0	72.9	
122 1,2-Dibromo-3-Chloropropan	75	13.881	13.881	0.000	69	29088	75.0	72.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.027	14.027	0.000	98	599364	225.0	214.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.447	14.447	0.000	98	376469	150.0	141.0	
126 1,2,4-Trichlorobenzene	180	14.708	14.708	0.000	94	127051	75.0	68.9	
127 Hexachlorobutadiene	225	14.885	14.885	0.000	95	57408	75.0	65.7	
128 Naphthalene	128	14.964	14.964	0.000	97	366622	75.0	74.5	
129 1,2,3-Trichlorobenzene	180	15.207	15.207	0.000	95	101227	75.0	70.1	
131 2,4,5-Trichlorotoluene	159	15.980	15.980	0.000	96	37510	75.0	61.1	
130 2,3,6-Trichlorotoluene	159	16.077	16.077	0.000	95	36291	75.0	64.5	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-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		150.0	146.3	
S 133 Xylenes, Total	106				0		150.0	144.2	
S 135 1,3-Dichloropropene, Total	1				0		150.0	149.0	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWVA pri Re_00005	Amount Added: 3.00	Units: uL	
VOA8260SURR_00028	Amount Added: 3.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added: 3.00	Units: uL	
voaWEEpri Res_00001	Amount Added: 3.00	Units: uL	
voaWKet2ndRes_00005	Amount Added: 3.00	Units: uL	
VOAACROPRI_00004	Amount Added: 7.00	Units: uL	
VOA8260INT_00026	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215010.D

Injection Date: 15-Dec-2014 15:45:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD15

Worklist Smp#: 10

Client ID:

Purge Vol: 5.000 mL

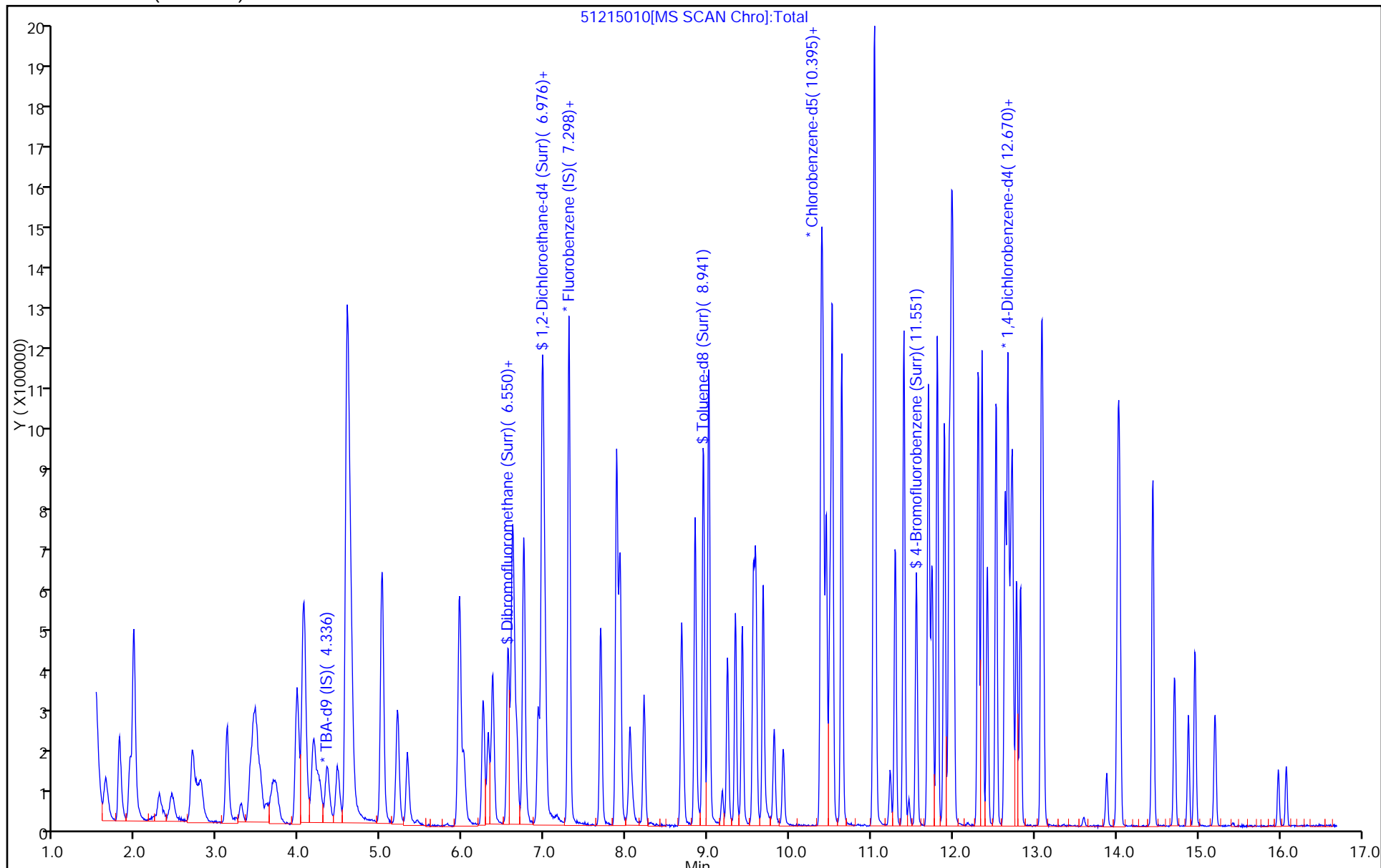
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215011.D  
 Lims ID: IC VSTD20  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 15-Dec-2014 16:09:30 ALS Bottle#: 11 Worklist Smp#: 11  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD20  
 Misc. Info.: 180-0004875-011  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 08:51:14 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond

Date: 15-Dec-2014 16:48:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.340	4.336	0.004	81	185121	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.297	7.298	-0.001	95	464026	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.387	10.383	0.004	95	104758	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.705	12.707	-0.002	94	146287	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.555	6.556	-0.001	75	167966	100.0	85.0	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.920	6.921	-0.001	92	286774	100.0	88.4	
\$ 7 Toluene-d8 (Surr)	98	8.945	8.947	-0.002	95	772272	100.0	88.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.549	11.551	-0.002	84	307884	100.0	92.7	
11 Dichlorodifluoromethane	85	1.633	1.629	0.004	98	273288	100.0	98.2	
12 Chloromethane	50	1.797	1.799	-0.002	99	523947	100.0	95.5	
13 Vinyl chloride	62	1.931	1.927	0.004	98	365992	100.0	97.1	
14 Butadiene	39	1.974	1.975	-0.001	96	503293	100.0	93.8	
15 Bromomethane	94	2.290	2.292	-0.002	92	107362	100.0	95.3	
16 Chloroethane	64	2.436	2.438	-0.002	96	179530	100.0	96.2	
17 Dichlorofluoromethane	67	2.679	2.687	-0.008	97	350450	100.0	94.4	
18 Trichlorofluoromethane	101	2.752	2.736	0.016	93	239313	100.0	101.8	
20 Ethyl ether	59	3.111	3.113	-0.002	94	303566	100.0	90.8	
21 Acrolein	56	3.282	3.289	-0.007	97	98752	200.0	197.6	
22 1,1-Dichloroethene	96	3.428	3.435	-0.007	91	242263	100.0	95.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.464	3.466	-0.002	95	245306	100.0	95.8	
24 Acetone	43	3.525	3.527	-0.002	97	272377	200.0	187.2	
25 Iodomethane	142	3.653	3.667	-0.014	99	312818	100.0	96.6	
26 Carbon disulfide	76	3.714	3.709	0.005	99	479421	100.0	97.8	
28 3-Chloro-1-propene	76	3.975	3.971	0.004	88	139671	100.0	97.9	
30 Methyl acetate	43	4.048	4.050	-0.002	100	1995763	500.0	472.3	
31 Methylene Chloride	84	4.170	4.172	-0.002	90	282467	100.0	96.9	
32 2-Methyl-2-propanol	59	4.468	4.464	0.004	84	233721	1000.0	944.4	
33 Acrylonitrile	53	4.584	4.585	-0.001	97	1844438	1000.0	947.2	
34 trans-1,2-Dichloroethene	96	4.596	4.597	-0.001	90	243743	100.0	95.2	
35 Methyl tert-butyl ether	73	4.626	4.622	0.004	90	630126	100.0	95.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.003	5.017	-0.014	97	621883	100.0	96.0	
37 1,1-Dichloroethane	63	5.204	5.200	0.004	97	578361	100.0	97.2	
38 Vinyl acetate	43	5.320	5.321	-0.001	97	556672	100.0	97.5	
44 2,2-Dichloropropane	77	5.952	5.954	-0.002	69	156961	100.0	99.5	
45 cis-1,2-Dichloroethene	96	5.965	5.966	-0.001	89	265573	100.0	96.0	
46 2-Butanone (MEK)	43	6.013	6.015	-0.002	97	448845	200.0	196.1	
49 Chlorobromomethane	128	6.244	6.246	-0.002	82	106775	100.0	92.5	
51 Tetrahydrofuran	42	6.311	6.313	-0.002	93	320665	200.0	184.2	
52 Chloroform	83	6.366	6.362	0.004	96	428736	100.0	95.3	
53 1,1,1-Trichloroethane	97	6.555	6.550	0.005	93	292080	100.0	100.0	
54 Cyclohexane	56	6.615	6.611	0.004	91	811131	100.0	98.8	
56 Carbon tetrachloride	117	6.737	6.739	-0.002	75	251804	100.0	99.3	
55 1,1-Dichloropropene	75	6.749	6.745	0.004	84	361815	100.0	98.2	
57 Isobutyl alcohol	41	6.968	6.964	0.004	93	339131	2500.0	2544.1	
58 Benzene	78	6.980	6.982	-0.002	94	1072233	100.0	93.4	
59 1,2-Dichloroethane	62	7.011	7.013	-0.002	94	420406	100.0	94.4	
62 n-Heptane	43	7.303	7.298	0.005	96	645815	100.0	98.3	
64 Trichloroethene	130	7.686	7.688	-0.002	95	236014	100.0	96.1	
66 Methylcyclohexane	83	7.887	7.882	0.005	92	476530	100.0	101.3	
67 1,2-Dichloropropane	63	7.923	7.925	-0.002	96	349012	100.0	98.9	
68 Dibromomethane	93	8.045	8.041	0.004	96	138247	100.0	95.0	
70 1,4-Dioxane	88	8.082	8.077	0.005	86	55226	2000.0	2090.5	M
71 Dichlorobromomethane	83	8.215	8.217	-0.002	95	289837	100.0	96.4	
74 cis-1,3-Dichloropropene	75	8.678	8.679	-0.001	85	348436	100.0	101.6	
75 4-Methyl-2-pentanone (MIBK)	43	8.842	8.844	-0.002	98	949167	200.0	209.8	
76 Toluene	91	9.012	9.008	0.004	97	1092848	100.0	98.3	
77 trans-1,3-Dichloropropene	75	9.237	9.239	-0.002	94	272778	100.0	105.9	
78 Ethyl methacrylate	69	9.335	9.336	-0.001	88	324927	100.0	106.0	
79 1,1,2-Trichloroethane	97	9.420	9.422	-0.002	93	215870	100.0	98.9	
80 Tetrachloroethene	164	9.554	9.555	-0.001	94	198281	100.0	96.7	
81 1,3-Dichloropropane	76	9.584	9.586	-0.002	92	415185	100.0	98.8	
82 2-Hexanone	43	9.675	9.677	-0.002	97	731532	200.0	202.0	
84 Chlorodibromomethane	129	9.809	9.811	-0.002	89	167905	100.0	104.6	
85 Ethylene Dibromide	107	9.925	9.920	0.005	99	202583	100.0	100.1	
86 3-Chlorobenzotrifluoride	180	10.393	10.389	0.004	94	357810	100.0	97.9	
87 Chlorobenzene	112	10.412	10.413	-0.001	89	668345	100.0	98.8	
88 4-Chlorobenzotrifluoride	180	10.448	10.450	-0.002	96	335563	100.0	98.2	
89 1,1,1,2-Tetrachloroethane	131	10.497	10.492	0.005	91	201091	100.0	97.4	
90 Ethylbenzene	106	10.521	10.523	-0.002	98	384275	100.0	100.3	
91 m-Xylene & p-Xylene	106	10.637	10.638	-0.001	97	477144	100.0	102.3	
92 o-Xylene	106	11.032	11.034	-0.002	98	451799	100.0	99.6	
93 Styrene	104	11.044	11.046	-0.002	92	769446	100.0	100.8	
94 Bromoform	173	11.233	11.234	-0.001	94	103601	100.0	102.2	
96 2-Chlorobenzotrifluoride	180	11.294	11.295	-0.001	94	345106	100.0	98.6	
97 Isopropylbenzene	105	11.397	11.399	-0.002	97	1147487	100.0	101.4	
99 1,1,2,2-Tetrachloroethane	83	11.695	11.691	0.004	96	302138	100.0	98.5	
100 Bromobenzene	156	11.701	11.703	-0.002	97	258939	100.0	98.4	
101 1,2,3-Trichloropropane	110	11.738	11.739	-0.001	89	89733	100.0	93.8	
102 trans-1,4-Dichloro-2-buten	53	11.750	11.752	-0.002	69	129754	100.0	98.7	
103 N-Propylbenzene	120	11.805	11.806	-0.001	99	316053	100.0	101.7	
104 2-Chlorotoluene	126	11.896	11.898	-0.002	94	263552	100.0	100.5	
105 3-Chlorotoluene	126	11.957	11.952	0.005	96	276497	100.0	99.0	



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	11.981	11.983	-0.002	94	939917	100.0	101.0	
107 4-Chlorotoluene	126	11.999	12.001	-0.002	99	281879	100.0	96.8	
108 tert-Butylbenzene	119	12.310	12.305	0.005	95	766289	100.0	100.3	
110 1,2,4-Trimethylbenzene	105	12.358	12.354	0.004	98	965955	100.0	101.0	
111 1,2-dichloro-4-(trifluorom	214	12.419	12.421	-0.002	98	262077	100.0	99.5	
112 sec-Butylbenzene	105	12.529	12.524	0.005	96	1090919	100.0	99.1	
113 1,3-Dichlorobenzene	146	12.638	12.640	-0.002	96	486729	100.0	98.0	
114 4-Isopropyltoluene	119	12.675	12.670	0.005	96	916889	100.0	103.5	
115 1,4-Dichlorobenzene	146	12.729	12.725	0.004	92	496017	100.0	96.7	
116 2,4-Dichloro-1-(trifluorom	214	12.778	12.780	-0.002	98	238127	100.0	96.3	
118 2,5-Dichlorobenzotrifluori	214	12.827	12.828	-0.001	97	262855	100.0	97.5	
120 n-Butylbenzene	91	13.082	13.078	0.004	98	827117	100.0	102.1	
121 1,2-Dichlorobenzene	146	13.100	13.102	-0.002	95	451798	100.0	98.0	
122 1,2-Dibromo-3-Chloropropan	75	13.885	13.881	0.004	70	41345	100.0	98.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.025	14.027	-0.002	98	870798	300.0	299.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.445	14.447	-0.002	98	544526	200.0	196.6	
126 1,2,4-Trichlorobenzene	180	14.713	14.708	0.005	94	185414	100.0	97.0	
127 Hexachlorobutadiene	225	14.877	14.885	-0.008	97	86456	100.0	95.3	
128 Naphthalene	128	14.962	14.964	-0.002	97	517111	100.0	101.3	
129 1,2,3-Trichlorobenzene	180	15.205	15.207	-0.002	93	145164	100.0	96.8	
131 2,4,5-Trichlorotoluene	159	15.984	15.980	0.004	93	60662	100.0	95.3	
130 2,3,6-Trichlorotoluene	159	16.081	16.077	0.004	92	53522	100.0	91.7	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-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		200.0	191.3	
S 133 Xylenes, Total	106				0		200.0	201.9	
S 135 1,3-Dichloropropene, Total	1				0		200.0	207.5	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

voaWVA pri Re_00005	Amount Added: 4.00	Units: uL	
VOA8260SURR_00028	Amount Added: 4.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added: 4.00	Units: uL	
voaWEEpri Res_00001	Amount Added: 4.00	Units: uL	
voaWKet2ndRes_00005	Amount Added: 4.00	Units: uL	
VOAACROPRI_00004	Amount Added: 8.00	Units: uL	
VOA8260INT_00026	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215011.D

Injection Date: 15-Dec-2014 16:09:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD20

Worklist Smp#: 11

Client ID:

Purge Vol: 5.000 mL

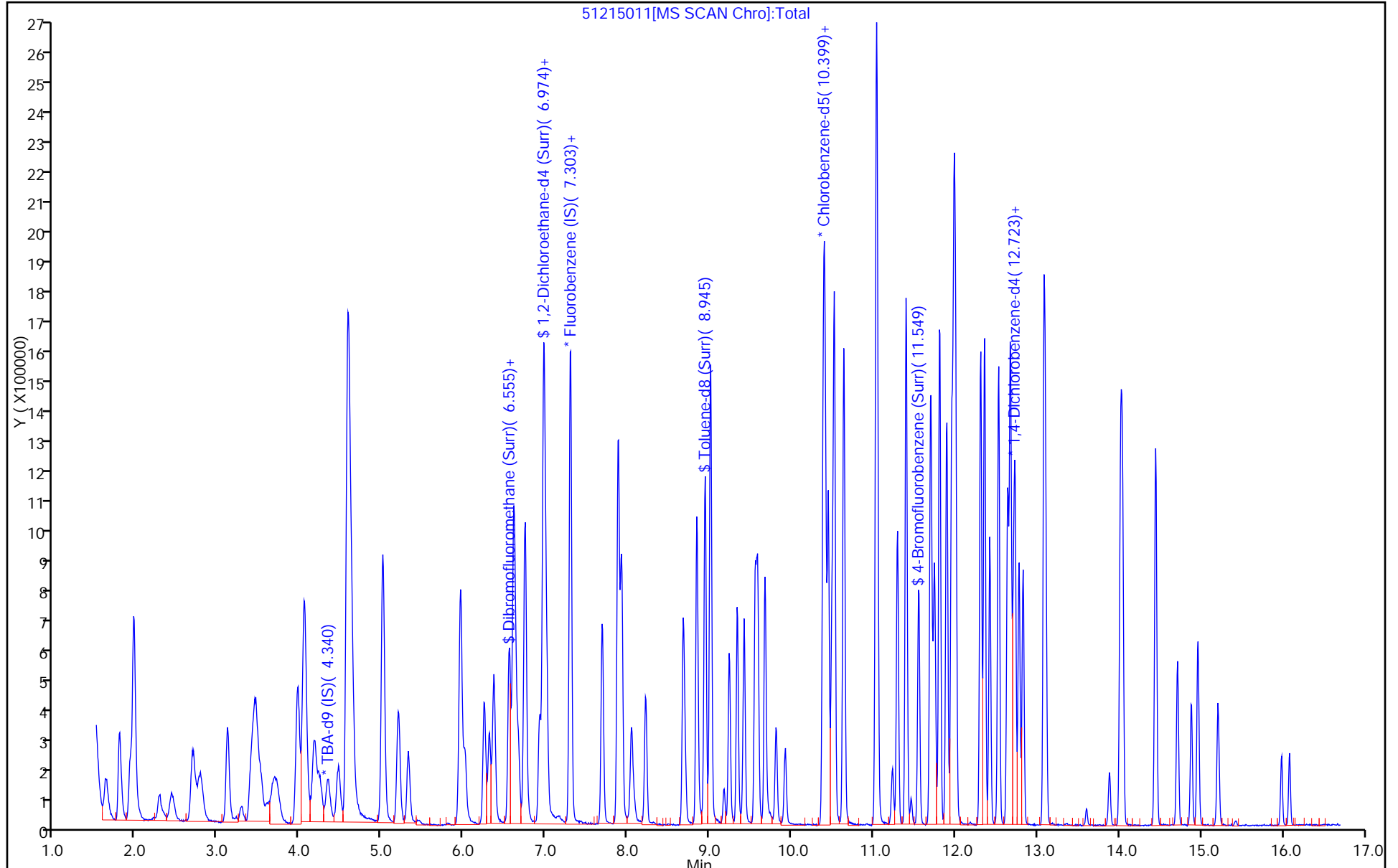
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)





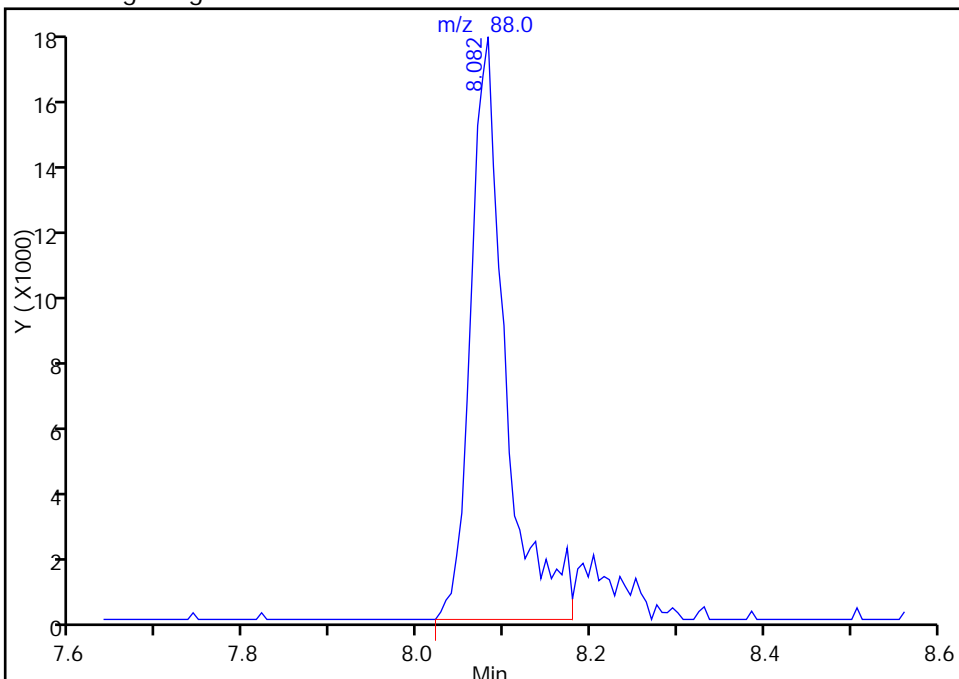
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215011.D  
Injection Date: 15-Dec-2014 16:09:30 Instrument ID: CHHP5  
Lims ID: IC VSTD20  
Client ID:  
Operator ID: 001562 ALS Bottle#: 11 Worklist Smp#: 11  
Purge Vol: 5.000 mL Dil. Factor: 1.0000  
Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
Column: DB-624 (0.18 mm) Detector: MS SCAN

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

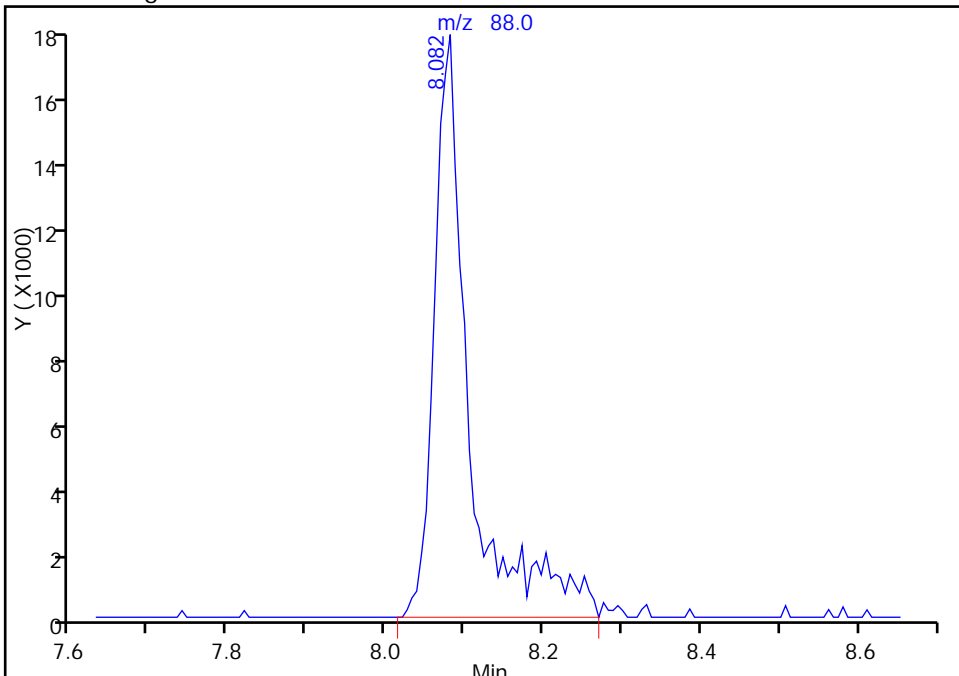
RT: 8.08  
Response: 49163  
Amount: 1857.3302

Processing Integration Results



RT: 8.08  
Response: 55226  
Amount: 2090.4917

Manual Integration Results



Reviewer: fergusond, 15-Dec-2014 16:48:16  
Audit Action: Manually Integrated  
Audit Reason: Peak Tail

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215012.D  
 Lims ID: IC VSTD35  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 15-Dec-2014 16:33:30 ALS Bottle#: 12 Worklist Smp#: 12  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD35  
 Misc. Info.: 180-0004875-012  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 08:51:16 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond

Date: 16-Dec-2014 08:38:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.345	4.336	0.009	85	188224	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.295	7.298	-0.003	97	434131	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.386	10.383	0.003	93	110231	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.704	12.707	-0.003	95	144359	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.553	6.556	-0.003	92	313362	175.0	169.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.924	6.921	0.003	92	517527	175.0	170.6	
\$ 7 Toluene-d8 (Surr)	98	8.944	8.947	-0.003	95	1402860	175.0	153.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.554	11.551	0.003	87	555403	175.0	159.0	
11 Dichlorodifluoromethane	85	1.632	1.629	0.003	98	461200	175.0	177.2	
12 Chloromethane	50	1.796	1.799	-0.003	99	879810	175.0	171.3	
13 Vinyl chloride	62	1.930	1.927	0.003	98	619242	175.0	175.6	
14 Butadiene	39	1.978	1.975	0.003	95	853165	175.0	170.0	
15 Bromomethane	94	2.289	2.292	-0.003	90	167265	175.0	158.6	
16 Chloroethane	64	2.441	2.438	0.003	96	292962	175.0	167.8	
17 Dichlorofluoromethane	67	2.684	2.687	-0.003	97	609495	175.0	175.5	
18 Trichlorofluoromethane	101	2.751	2.736	0.015	96	414214	175.0	188.3	
20 Ethyl ether	59	3.116	3.113	0.003	94	526502	175.0	168.4	
21 Acrolein	56	3.293	3.289	0.004	98	108540	225.0	232.1	
22 1,1-Dichloroethene	96	3.445	3.435	0.010	91	425581	175.0	180.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.469	3.466	0.003	84	430964	175.0	180.0	
24 Acetone	43	3.530	3.527	0.003	98	484655	350.0	356.0	
25 Iodomethane	142	3.658	3.667	-0.009	98	541195	175.0	178.7	
26 Carbon disulfide	76	3.718	3.709	0.009	99	894088	175.0	195.0	
28 3-Chloro-1-propene	76	3.968	3.971	-0.003	88	260534	175.0	195.2	
30 Methyl acetate	43	4.053	4.050	0.003	100	3368843	875.0	852.2	
31 Methylene Chloride	84	4.175	4.172	0.003	91	470925	175.0	176.9	
32 2-Methyl-2-propanol	59	4.473	4.464	0.009	85	472853	1750.0	1879.1	
33 Acrylonitrile	53	4.582	4.585	-0.003	96	3108626	1750.0	1706.3	
34 trans-1,2-Dichloroethene	96	4.594	4.597	-0.003	90	418880	175.0	175.0	
35 Methyl tert-butyl ether	73	4.631	4.622	0.009	90	1075251	175.0	173.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.014	5.017	-0.003	96	1046157	175.0	172.6	
37 1,1-Dichloroethane	63	5.197	5.200	-0.003	97	977975	175.0	175.6	
38 Vinyl acetate	43	5.318	5.321	-0.003	97	981516	175.0	183.8	
44 2,2-Dichloropropane	77	5.951	5.954	-0.003	72	272347	175.0	184.5	
45 cis-1,2-Dichloroethene	96	5.963	5.966	-0.003	88	459987	175.0	177.7	
46 2-Butanone (MEK)	43	6.012	6.015	-0.003	97	770041	350.0	359.6	
49 Chlorobromomethane	128	6.249	6.246	0.003	82	189932	175.0	175.9	
51 Tetrahydrofuran	42	6.310	6.313	-0.003	93	570461	350.0	350.3	
52 Chloroform	83	6.365	6.362	0.003	97	726926	175.0	172.6	
53 1,1,1-Trichloroethane	97	6.553	6.550	0.003	93	498247	175.0	182.3	
54 Cyclohexane	56	6.614	6.611	0.003	90	1372084	175.0	178.7	
56 Carbon tetrachloride	117	6.742	6.739	0.003	94	449549	175.0	189.5	
55 1,1-Dichloropropene	75	6.748	6.745	0.003	86	616547	175.0	178.9	
57 Isobutyl alcohol	41	6.967	6.964	0.003	95	597870	4375.0	4794.0	
58 Benzene	78	6.979	6.982	-0.003	95	1810201	175.0	168.6	
59 1,2-Dichloroethane	62	7.010	7.013	-0.003	95	723279	175.0	173.5	
62 n-Heptane	43	7.302	7.298	0.004	97	1100542	175.0	179.1	
64 Trichloroethene	130	7.685	7.688	-0.003	95	412412	175.0	179.4	
66 Methylcyclohexane	83	7.886	7.882	0.004	95	798320	175.0	181.4	
67 1,2-Dichloropropane	63	7.922	7.925	-0.003	95	580507	175.0	175.7	
68 Dibromomethane	93	8.044	8.041	0.003	97	241280	175.0	177.1	
70 1,4-Dioxane	88	8.074	8.077	-0.003	87	94223	3500.0	3812.3	
71 Dichlorobromomethane	83	8.220	8.217	0.003	95	516759	175.0	183.8	
74 cis-1,3-Dichloropropene	75	8.676	8.679	-0.003	85	617016	175.0	192.3	
75 4-Methyl-2-pentanone (MIBK)	43	8.841	8.844	-0.003	99	1587323	350.0	333.4	
76 Toluene	91	9.011	9.008	0.003	96	1825825	175.0	156.0	
77 trans-1,3-Dichloropropene	75	9.236	9.239	-0.003	92	504625	175.0	186.2	
78 Ethyl methacrylate	69	9.339	9.336	0.003	89	574920	175.0	178.2	
79 1,1,2-Trichloroethane	97	9.419	9.422	-0.003	95	367605	175.0	160.1	
80 Tetrachloroethene	164	9.552	9.555	-0.003	94	341247	175.0	158.1	
81 1,3-Dichloropropane	76	9.583	9.586	-0.003	92	710288	175.0	160.6	
82 2-Hexanone	43	9.674	9.677	-0.003	98	1335292	350.0	350.4	
84 Chlorodibromomethane	129	9.814	9.811	0.003	89	308265	175.0	182.6	
85 Ethylene Dibromide	107	9.917	9.920	-0.003	98	358303	175.0	168.3	
86 3-Chlorobenzotrifluoride	180	10.392	10.389	0.003	92	633751	175.0	164.7	
87 Chlorobenzene	112	10.410	10.413	-0.003	89	1146615	175.0	161.1	
88 4-Chlorobenzotrifluoride	180	10.453	10.450	0.003	95	605917	175.0	168.5	
89 1,1,1,2-Tetrachloroethane	131	10.489	10.492	-0.003	92	359052	175.0	165.3	
90 Ethylbenzene	106	10.520	10.523	-0.003	98	674389	175.0	167.3	
91 m-Xylene & p-Xylene	106	10.635	10.638	-0.003	96	807449	175.0	164.5	
92 o-Xylene	106	11.031	11.034	-0.003	97	779332	175.0	163.3	
93 Styrene	104	11.043	11.046	-0.003	86	1309347	175.0	163.1	
94 Bromoform	173	11.231	11.234	-0.003	96	198764	175.0	186.3	
96 2-Chlorobenzotrifluoride	180	11.292	11.295	-0.003	94	608627	175.0	165.3	
97 Isopropylbenzene	105	11.396	11.399	-0.003	97	1932433	175.0	162.3	
99 1,1,2,2-Tetrachloroethane	83	11.694	11.691	0.003	95	530535	175.0	164.4	
100 Bromobenzene	156	11.706	11.703	0.003	94	454034	175.0	174.8	
101 1,2,3-Trichloropropane	110	11.742	11.739	0.003	89	160641	175.0	170.1	
102 trans-1,4-Dichloro-2-buten	53	11.749	11.752	-0.003	75	236954	175.0	182.7	
103 N-Propylbenzene	120	11.809	11.806	0.003	98	551938	175.0	180.0	
104 2-Chlorotoluene	126	11.895	11.898	-0.003	94	463229	175.0	179.1	
105 3-Chlorotoluene	126	11.955	11.952	0.003	96	491483	175.0	178.2	

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	11.980	11.983	-0.003	94	1595887	175.0	173.8	
107 4-Chlorotoluene	126	12.004	12.001	0.003	99	492402	175.0	171.3	
108 tert-Butylbenzene	119	12.308	12.305	0.003	94	1316602	175.0	174.7	
110 1,2,4-Trimethylbenzene	105	12.357	12.354	0.003	98	1655214	175.0	175.4	
111 1,2-dichloro-4-(trifluorom	214	12.418	12.421	-0.003	98	471091	175.0	181.2	
112 sec-Butylbenzene	105	12.527	12.524	0.003	96	1876479	175.0	172.8	
113 1,3-Dichlorobenzene	146	12.637	12.640	-0.003	96	863694	175.0	176.2	
114 4-Isopropyltoluene	119	12.673	12.670	0.003	96	1567173	175.0	179.2	
115 1,4-Dichlorobenzene	146	12.728	12.725	0.003	91	875578	175.0	173.0	
116 2,4-Dichloro-1-(trifluorom	214	12.777	12.780	-0.003	98	442330	175.0	181.3	
118 2,5-Dichlorobenzotrifluori	214	12.825	12.828	-0.003	98	501230	175.0	188.3	
120 n-Butylbenzene	91	13.081	13.078	0.003	97	1449265	175.0	181.4	
121 1,2-Dichlorobenzene	146	13.099	13.102	-0.003	94	790430	175.0	173.8	
122 1,2-Dibromo-3-Chloropropan	75	13.884	13.881	0.003	79	83763	175.0	203.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.024	14.027	-0.003	97	1631254	525.0	569.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.444	14.447	-0.003	98	1022814	350.0	374.2	
126 1,2,4-Trichlorobenzene	180	14.711	14.708	0.003	94	364694	175.0	193.3	
127 Hexachlorobutadiene	225	14.882	14.885	-0.003	95	170084	175.0	190.1	
128 Naphthalene	128	14.961	14.964	-0.003	97	974048	175.0	193.4	
129 1,2,3-Trichlorobenzene	180	15.210	15.207	0.003	93	284156	175.0	192.0	
131 2,4,5-Trichlorotoluene	159	15.983	15.980	0.003	97	130241	175.0	207.3	
130 2,3,6-Trichlorotoluene	159	16.080	16.077	0.003	95	119691	175.0	207.9	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		350.0	352.7	
S 133 Xylenes, Total	106				0		350.0	327.8	
S 135 1,3-Dichloropropene, Total	1				0		350.0	378.6	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOAACROPRI_00004	Amount Added: 9.00	Units: uL	
VOA8260SURR_00028	Amount Added: 7.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added: 7.00	Units: uL	
voaWEEpri Res_00001	Amount Added: 7.00	Units: uL	
voaWKet2ndRes_00005	Amount Added: 7.00	Units: uL	
voaWVA pri Re_00005	Amount Added: 7.00	Units: uL	
VOA8260INT_00026	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215012.D

Injection Date: 15-Dec-2014 16:33:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD35

Worklist Smp#: 12

Client ID:

Purge Vol: 5.000 mL

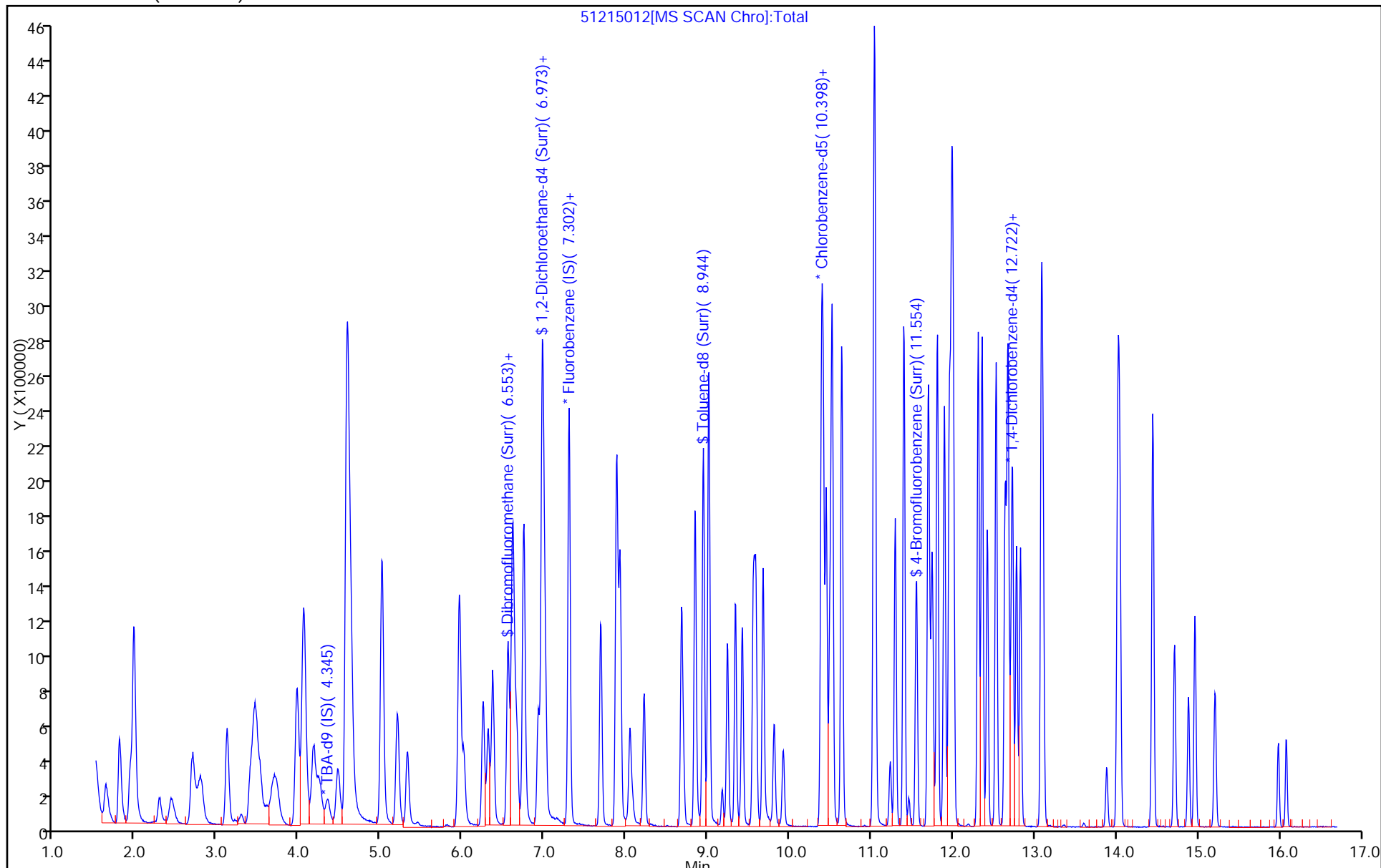
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Lims ID: IC VSTD40  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 15-Dec-2014 16:57:30 ALS Bottle#: 13 Worklist Smp#: 13  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: IC VSTD40  
 Misc. Info.: 180-0004875-013  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub4  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 08:51:17 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond

Date: 16-Dec-2014 08:47:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.352	4.336	0.016	84	198327	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.296	7.298	-0.002	97	419962	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.380	10.383	-0.003	92	108982	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.704	12.707	-0.003	96	145279	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.554	6.556	-0.002	85	365236	200.0	204.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.925	6.921	0.004	91	576810	200.0	196.5	
\$ 7 Toluene-d8 (Surr)	98	8.945	8.947	-0.002	95	1574848	200.0	173.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.548	11.551	-0.003	85	647101	200.0	187.4	
11 Dichlorodifluoromethane	85	1.632	1.629	0.003	98	499452	200.0	198.3	
12 Chloromethane	50	1.797	1.799	-0.002	100	957633	200.0	192.8	
13 Vinyl chloride	62	1.930	1.927	0.003	98	666295	200.0	195.3	
14 Butadiene	39	1.979	1.975	0.004	96	919270	200.0	189.4	
15 Bromomethane	94	2.289	2.292	-0.003	90	189870	200.0	186.1	
16 Chloroethane	64	2.441	2.438	0.003	96	334503	200.0	198.1	
17 Dichlorofluoromethane	67	2.691	2.687	0.004	97	658021	200.0	195.9	
18 Trichlorofluoromethane	101	2.739	2.736	0.003	94	450195	200.0	211.6	
20 Ethyl ether	59	3.117	3.113	0.004	95	608282	200.0	201.1	
21 Acrolein	56	3.281	3.289	-0.008	98	119026	250.0	263.1	
22 1,1-Dichloroethene	96	3.427	3.435	-0.008	92	454023	200.0	198.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.482	3.466	0.016	96	469441	200.0	202.6	
24 Acetone	43	3.524	3.527	-0.003	98	544467	400.0	413.5	
25 Iodomethane	142	3.664	3.667	-0.003	99	628901	200.0	214.6	
26 Carbon disulfide	76	3.701	3.709	-0.008	99	1012677	200.0	228.4	
28 3-Chloro-1-propene	76	3.974	3.971	0.003	89	291169	200.0	225.5	
30 Methyl acetate	43	4.054	4.050	0.003	100	3862317	1000.0	1010.0	
31 Methylene Chloride	84	4.175	4.172	0.003	89	528356	200.0	206.0	
32 2-Methyl-2-propanol	59	4.473	4.464	0.009	90	542078	2000.0	2044.5	
33 Acrylonitrile	53	4.583	4.585	-0.002	97	3610987	2000.0	2048.9	
34 trans-1,2-Dichloroethene	96	4.589	4.597	-0.008	90	460491	200.0	198.8	
35 Methyl tert-butyl ether	73	4.625	4.622	0.003	90	1338818	200.0	223.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.009	5.017	-0.008	97	1145508	200.0	195.4	
37 1,1-Dichloroethane	63	5.197	5.200	-0.003	96	1119222	200.0	207.7	
38 Vinyl acetate	43	5.319	5.321	-0.002	97	1122187	200.0	217.2	
44 2,2-Dichloropropane	77	5.952	5.954	-0.002	70	296455	200.0	207.6	
45 cis-1,2-Dichloroethene	96	5.964	5.966	-0.002	89	522231	200.0	208.6	
46 2-Butanone (MEK)	43	6.012	6.015	-0.003	96	898036	400.0	433.5	
49 Chlorobromomethane	128	6.250	6.246	0.004	82	220532	200.0	211.2	
51 Tetrahydrofuran	42	6.310	6.313	-0.003	94	656256	400.0	416.5	
52 Chloroform	83	6.365	6.362	0.003	95	825564	200.0	202.7	
53 1,1,1-Trichloroethane	97	6.554	6.550	0.004	93	552222	200.0	208.9	
54 Cyclohexane	56	6.609	6.611	-0.002	91	1491081	200.0	200.7	
56 Carbon tetrachloride	117	6.736	6.739	-0.003	94	496996	200.0	216.5	
55 1,1-Dichloropropene	75	6.748	6.745	0.003	87	678270	200.0	203.4	
57 Isobutyl alcohol	41	6.967	6.964	0.003	94	703715	5000.0	5833.0	
58 Benzene	78	6.980	6.982	-0.002	94	2039448	200.0	196.4	
59 1,2-Dichloroethane	62	7.010	7.013	-0.003	95	833342	200.0	206.7	
62 n-Heptane	43	7.302	7.298	0.004	97	1198073	200.0	201.5	
64 Trichloroethene	130	7.691	7.688	0.003	93	451795	200.0	203.2	
66 Methylcyclohexane	83	7.880	7.882	-0.002	94	884141	200.0	207.7	
67 1,2-Dichloropropane	63	7.923	7.925	-0.002	95	670378	200.0	209.8	
68 Dibromomethane	93	8.044	8.041	0.003	98	278367	200.0	211.3	
70 1,4-Dioxane	88	8.081	8.077	0.004	86	107491	4000.0	4495.8	
71 Dichlorobromomethane	83	8.221	8.217	0.004	96	599497	200.0	220.4	
74 cis-1,3-Dichloropropene	75	8.677	8.679	-0.002	85	725599	200.0	233.8	
75 4-Methyl-2-pentanone (MIBK)	43	8.841	8.844	-0.003	99	1885405	400.0	400.5	
76 Toluene	91	9.012	9.008	0.004	96	2038543	200.0	176.2	
77 trans-1,3-Dichloropropene	75	9.237	9.239	-0.002	92	587120	200.0	219.2	
78 Ethyl methacrylate	69	9.334	9.336	-0.002	91	699914	200.0	219.4	
79 1,1,2-Trichloroethane	97	9.419	9.422	-0.003	95	431008	200.0	189.8	
80 Tetrachloroethene	164	9.559	9.555	0.004	95	381182	200.0	178.6	
81 1,3-Dichloropropane	76	9.583	9.586	-0.003	93	823013	200.0	188.2	
82 2-Hexanone	43	9.675	9.677	-0.002	98	1575531	400.0	418.1	
84 Chlorodibromomethane	129	9.808	9.811	-0.003	88	361304	200.0	216.5	
85 Ethylene Dibromide	107	9.918	9.920	-0.002	99	425795	200.0	202.2	
86 3-Chlorobenzotrifluoride	180	10.392	10.389	0.003	93	707075	200.0	185.9	
87 Chlorobenzene	112	10.411	10.413	-0.002	88	1305587	200.0	185.5	
88 4-Chlorobenzotrifluoride	180	10.447	10.450	-0.003	95	658198	200.0	185.2	
89 1,1,1,2-Tetrachloroethane	131	10.490	10.492	-0.002	93	421291	200.0	196.2	
90 Ethylbenzene	106	10.520	10.523	-0.003	97	753212	200.0	189.0	
91 m-Xylene & p-Xylene	106	10.636	10.638	-0.002	97	918551	200.0	189.3	
92 o-Xylene	106	11.031	11.034	-0.003	94	886345	200.0	187.9	
93 Styrene	104	11.043	11.046	-0.003	86	1503510	200.0	189.4	
94 Bromoform	173	11.232	11.234	-0.002	96	239804	200.0	227.3	
96 2-Chlorobenzotrifluoride	180	11.293	11.295	-0.002	95	685270	200.0	188.3	
97 Isopropylbenzene	105	11.396	11.399	-0.003	97	2160550	200.0	183.6	
99 1,1,2,2-Tetrachloroethane	83	11.694	11.691	0.003	96	619241	200.0	194.1	
100 Bromobenzene	156	11.700	11.703	-0.003	94	526184	200.0	201.3	
101 1,2,3-Trichloropropane	110	11.743	11.739	0.004	89	187299	200.0	197.1	
102 trans-1,4-Dichloro-2-buten	53	11.749	11.752	-0.003	75	281348	200.0	215.6	
103 N-Propylbenzene	120	11.804	11.806	-0.002	97	621025	200.0	201.3	
104 2-Chlorotoluene	126	11.895	11.898	-0.003	94	523196	200.0	201.0	
105 3-Chlorotoluene	126	11.956	11.952	0.004	96	560555	200.0	202.0	



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	11.980	11.983	-0.003	95	1800040	200.0	194.7	
107 4-Chlorotoluene	126	11.999	12.001	-0.003	98	558467	200.0	193.1	
108 tert-Butylbenzene	119	12.309	12.305	0.004	94	1460867	200.0	192.6	
110 1,2,4-Trimethylbenzene	105	12.357	12.354	0.003	98	1843606	200.0	194.1	
111 1,2-dichloro-4-(trifluorom	214	12.418	12.421	-0.003	97	516955	200.0	197.5	
112 sec-Butylbenzene	105	12.528	12.524	0.004	97	2066631	200.0	189.1	
113 1,3-Dichlorobenzene	146	12.637	12.640	-0.003	95	976811	200.0	198.0	
114 4-Isopropyltoluene	119	12.668	12.670	-0.002	96	1745049	200.0	198.3	
115 1,4-Dichlorobenzene	146	12.729	12.725	0.004	90	997200	200.0	195.8	
116 2,4-Dichloro-1-(trifluorom	214	12.777	12.780	-0.003	98	484207	200.0	197.2	
118 2,5-Dichlorobenzotrifluori	214	12.826	12.828	-0.002	98	535139	200.0	199.8	
120 n-Butylbenzene	91	13.081	13.078	0.003	96	1579894	200.0	196.5	
121 1,2-Dichlorobenzene	146	13.100	13.102	-0.002	94	905753	200.0	197.9	
122 1,2-Dibromo-3-Chloropropan	75	13.878	13.881	-0.003	87	99113	200.0	238.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.024	14.027	-0.003	97	1812056	600.0	628.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.444	14.447	-0.003	97	1166096	400.0	423.9	
126 1,2,4-Trichlorobenzene	180	14.712	14.708	0.004	94	412323	200.0	217.1	
127 Hexachlorobutadiene	225	14.882	14.885	-0.003	95	180674	200.0	200.6	
128 Naphthalene	128	14.961	14.964	-0.003	97	1151885	200.0	227.2	
129 1,2,3-Trichlorobenzene	180	15.205	15.207	-0.003	94	333142	200.0	223.7	
131 2,4,5-Trichlorotoluene	159	15.983	15.980	0.003	98	150868	200.0	238.6	
130 2,3,6-Trichlorotoluene	159	16.074	16.077	-0.003	93	136944	200.0	236.3	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-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	407.4	
S 133 Xylenes, Total	106				0		400.0	377.2	
S 135 1,3-Dichloropropene, Total	1				0		400.0	453.0	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWVA pri Re_00005	Amount Added: 8.00	Units: uL	
VOA8260SURR_00028	Amount Added: 8.00	Units: uL	
VOA8260VOAPRI_00092	Amount Added: 8.00	Units: uL	
voaWEEpri Res_00001	Amount Added: 8.00	Units: uL	
voaWKet2ndRes_00005	Amount Added: 8.00	Units: uL	
VOAACROPRI_00004	Amount Added: 10.00	Units: uL	
VOA8260INT_00026	Amount Added: 2.00	Units: uL	Run Reagent



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D

Injection Date: 15-Dec-2014 16:57:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: IC VSTD40

Worklist Smp#: 13

Client ID:

Purge Vol: 5.000 mL

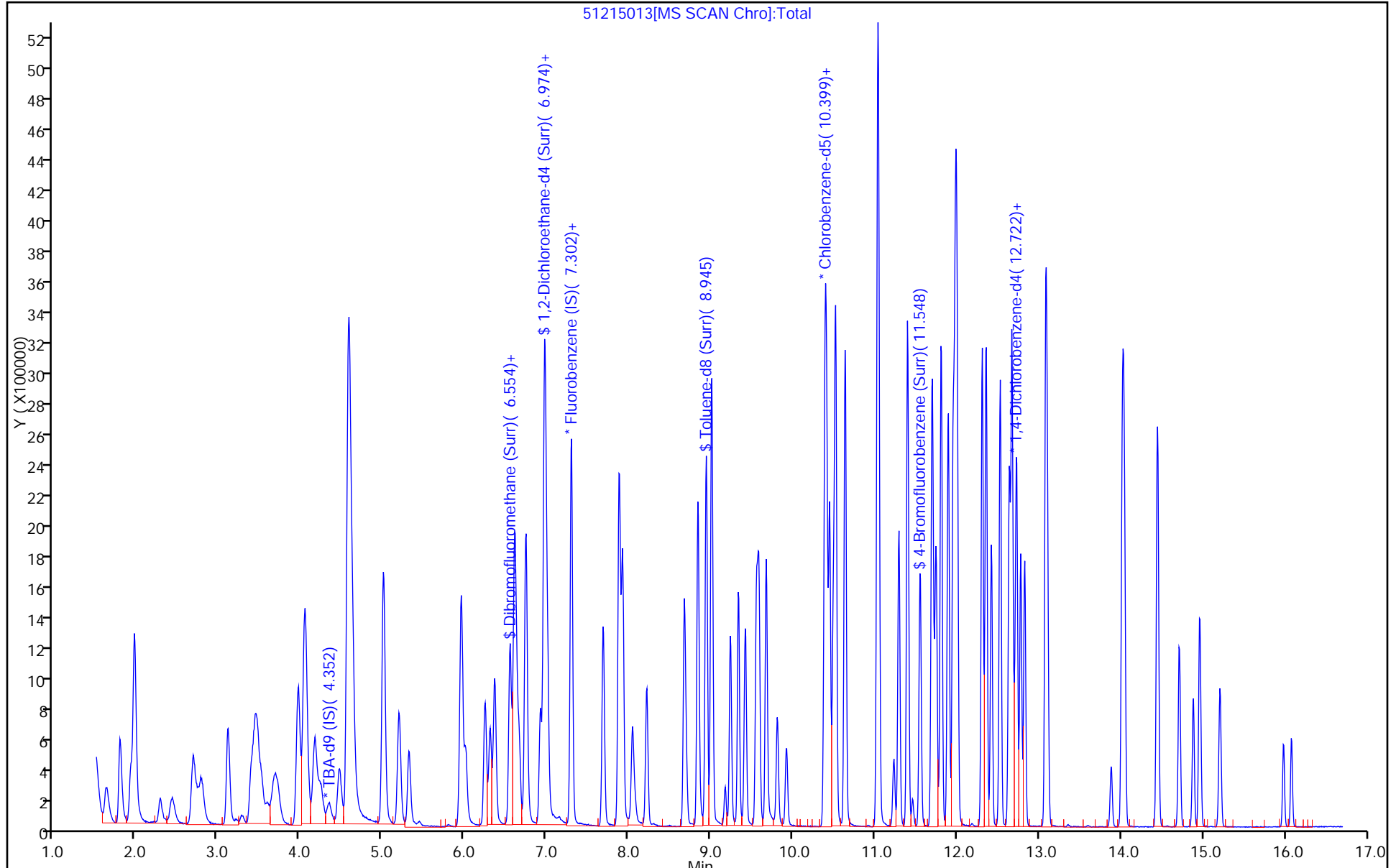
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13  
 Instrument ID: CHHP5 Calib Start Date: 11/18/2014 14:22  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 11/18/2014 16:46  
 Lab File ID: 50128003.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1588	0.1930	0.0100	24.3	20.0	21.5*	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 28-Jan-2015 09:13:30 ALS Bottle#: 2 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 180-0005445-003  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub20  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 12:12:10 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 10:42:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.308	4.308	0.000	91	174016	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.276	0.000	99	474967	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	98	108247	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	94	151657	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.534	6.534	0.000	75	112644	50.0	55.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.899	0.000	93	161974	50.0	48.8	
\$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	94	482906	50.0	53.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	85	180192	50.0	52.5	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	94	131073	50.0	46.0	
12 Chloromethane	50	1.783	1.783	0.000	99	232029	50.0	41.3	
13 Vinyl chloride	62	1.911	1.911	0.000	97	179910	50.0	46.6	
14 Butadiene	39	1.959	1.959	0.000	97	222841	50.0	40.6	
15 Bromomethane	94	2.270	2.270	0.000	91	72713	50.0	63.0	
16 Chloroethane	64	2.416	2.416	0.000	97	90560	50.0	47.4	
17 Dichlorofluoromethane	67	2.665	2.665	0.000	96	190553	50.0	50.2	
18 Trichlorofluoromethane	101	2.702	2.702	0.000	95	159702	50.0	66.4	
20 Ethyl ether	59	3.091	3.091	0.000	97	153115	50.0	44.8	
21 Acrolein	56	3.255	3.255	0.000	98	46673	150.0	91.2	
22 1,1-Dichloroethene	96	3.383	3.383	0.000	96	139141	50.0	53.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.444	0.000	93	144955	50.0	55.3	
24 Acetone	43	3.499	3.499	0.000	97	213498	100.0	143.4	
25 Iodomethane	142	3.584	3.584	0.000	99	208103	50.0	62.8	
26 Carbon disulfide	76	3.675	3.675	0.000	99	260647	50.0	52.0	
28 3-Chloro-1-propene	76	3.955	3.955	0.000	90	70957	50.0	48.6	
30 Methyl acetate	43	4.022	4.022	0.000	100	941872	250.0	217.8	
31 Methylene Chloride	84	4.156	4.156	0.000	92	163208	50.0	52.4	
32 2-Methyl-2-propanol	59	4.435	4.435	0.000	91	118968	500.0	511.4	
33 Acrylonitrile	53	4.557	4.557	0.000	97	825806	500.0	414.3	
34 trans-1,2-Dichloroethene	96	4.563	4.563	0.000	93	157807	50.0	60.2	
35 Methyl tert-butyl ether	73	4.588	4.588	0.000	95	361198	50.0	53.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.983	4.983	0.000	96	305408	50.0	46.1	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	96	315261	50.0	51.7	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	67	117915	50.0	73.0	
45 cis-1,2-Dichloroethene	96	5.938	5.938	0.000	85	165202	50.0	58.3	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	97	269525	100.0	115.0	
49 Chlorobromomethane	128	6.224	6.224	0.000	86	69102	50.0	58.5	
51 Tetrahydrofuran	42	6.285	6.285	0.000	94	131653	100.0	73.9	
52 Chloroform	83	6.352	6.352	0.000	97	250156	50.0	54.3	
53 1,1,1-Trichloroethane	97	6.534	6.534	0.000	96	185584	50.0	62.1	
54 Cyclohexane	56	6.589	6.589	0.000	96	359760	50.0	42.8	
56 Carbon tetrachloride	117	6.717	6.717	0.000	72	155112	50.0	59.8	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	87	215243	50.0	57.1	
57 Isobutyl alcohol	41	6.942	6.942	0.000	96	135896	1250.0	996.0	
58 Benzene	78	6.954	6.954	0.000	97	627004	50.0	53.4	
59 1,2-Dichloroethane	62	6.990	6.990	0.000	96	233257	50.0	51.1	
62 n-Heptane	43	7.276	7.276	0.000	97	293990	50.0	43.7	
64 Trichloroethene	130	7.666	7.666	0.000	97	147930	50.0	58.8	
66 Methylcyclohexane	83	7.860	7.860	0.000	97	251534	50.0	52.3	
67 1,2-Dichloropropane	63	7.903	7.903	0.000	93	169194	50.0	46.8	
68 Dibromomethane	93	8.031	8.031	0.000	95	82281	50.0	55.2	
70 1,4-Dioxane	88	8.049	8.049	0.000	92	21590	1000.0	798.4	
71 Dichlorobromomethane	83	8.195	8.195	0.000	97	155551	50.0	50.6	
73 2-Chloroethyl vinyl ether	63	8.524	8.524	0.000	88	183352	100.0	121.5	
74 cis-1,3-Dichloropropene	75	8.657	8.657	0.000	87	190381	50.0	54.2	
75 4-Methyl-2-pentanone (MIBK)	43	8.822	8.822	0.000	99	439174	100.0	93.9	
76 Toluene	91	8.992	8.992	0.000	98	647393	50.0	56.3	
77 trans-1,3-Dichloropropene	75	9.223	9.223	0.000	96	159587	50.0	60.0	
78 Ethyl methacrylate	69	9.320	9.320	0.000	93	155410	50.0	49.0	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	93	121117	50.0	53.7	
80 Tetrachloroethene	164	9.539	9.539	0.000	94	114762	50.0	54.1	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	96	219752	50.0	50.6	
82 2-Hexanone	43	9.655	9.655	0.000	98	342121	100.0	91.4	
84 Chlorodibromomethane	129	9.789	9.789	0.000	90	93851	50.0	56.6	
85 Ethylene Dibromide	107	9.904	9.904	0.000	99	109893	50.0	52.5	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	94	203559	50.0	53.9	
87 Chlorobenzene	112	10.391	10.391	0.000	92	418309	50.0	59.8	
88 4-Chlorobenzotrifluoride	180	10.434	10.434	0.000	95	197046	50.0	55.8	
89 1,1,1,2-Tetrachloroethane	131	10.476	10.476	0.000	92	117497	50.0	55.1	
90 Ethylbenzene	106	10.501	10.501	0.000	99	220317	50.0	55.7	
91 m-Xylene & p-Xylene	106	10.622	10.622	0.000	98	272822	50.0	56.6	
92 o-Xylene	106	11.012	11.012	0.000	99	260333	50.0	55.6	
93 Styrene	104	11.030	11.030	0.000	94	417402	50.0	52.9	
94 Bromoform	173	11.218	11.218	0.000	94	52701	50.0	50.3	
96 2-Chlorobenzotrifluoride	180	11.273	11.273	0.000	94	194286	50.0	53.7	
97 Isopropylbenzene	105	11.383	11.383	0.000	97	669732	50.0	57.3	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	160975	50.0	50.8	
100 Bromobenzene	156	11.687	11.687	0.000	97	153791	50.0	56.4	
101 1,2,3-Trichloropropane	110	11.723	11.723	0.000	89	50583	50.0	51.0	
102 trans-1,4-Dichloro-2-buten	53	11.729	11.729	0.000	71	60824	50.0	44.6	
103 N-Propylbenzene	120	11.790	11.790	0.000	99	194862	50.0	60.5	
104 2-Chlorotoluene	126	11.875	11.875	0.000	95	162980	50.0	60.0	
105 3-Chlorotoluene	126	11.936	11.936	0.000	95	162540	50.0	56.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	94	550536	50.0	57.1	
107 4-Chlorotoluene	126	11.985	11.985	0.000	98	170893	50.0	56.6	
108 tert-Butylbenzene	119	12.289	12.289	0.000	94	455327	50.0	57.5	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	99	548723	50.0	55.3	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	97	142669	50.0	52.2	
112 sec-Butylbenzene	105	12.508	12.508	0.000	96	632866	50.0	55.5	
113 1,3-Dichlorobenzene	146	12.624	12.624	0.000	96	292773	50.0	56.9	
114 4-Isopropyltoluene	119	12.654	12.654	0.000	97	540215	50.0	58.8	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	94	306400	50.0	57.6	
116 2,4-Dichloro-1-(trifluorom	214	12.758	12.758	0.000	95	120826	50.0	47.1	
118 2,5-Dichlorobenzotrifluori	214	12.806	12.806	0.000	99	142483	50.0	51.0	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	470490	50.0	56.0	
121 1,2-Dichlorobenzene	146	13.086	13.086	0.000	95	267560	50.0	56.0	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.865	0.000	69	22819	50.0	52.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	98	507716	150.0	168.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.431	0.000	99	313881	100.0	109.3	
126 1,2,4-Trichlorobenzene	180	14.692	14.692	0.000	93	101827	50.0	51.4	
127 Hexachlorobutadiene	225	14.862	14.862	0.000	93	54231	50.0	57.7	
128 Naphthalene	128	14.942	14.942	0.000	98	266869	50.0	50.4	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	77937	50.0	50.1	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	97	33948	50.0	51.4	
130 2,3,6-Trichlorotoluene	159	16.061	16.061	0.000	95	33206	50.0	54.9	
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	112.2	
S 134 1,2-Dichloroethene, Total	96				0		100.0	118.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	114.2	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOA8260VOAPRI_00097	Amount Added: 2.00	Units: uL	
voaWeemixpri_00001	Amount Added: 2.00	Units: uL	
voaWket2nd Re_00001	Amount Added: 2.00	Units: uL	
VOA2CEVE2ND_00005	Amount Added: 2.00	Units: uL	
voaWAcropri R_00006	Amount Added: 6.00	Units: uL	
VOA8260INT_00027	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D

Injection Date: 28-Jan-2015 09:13:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

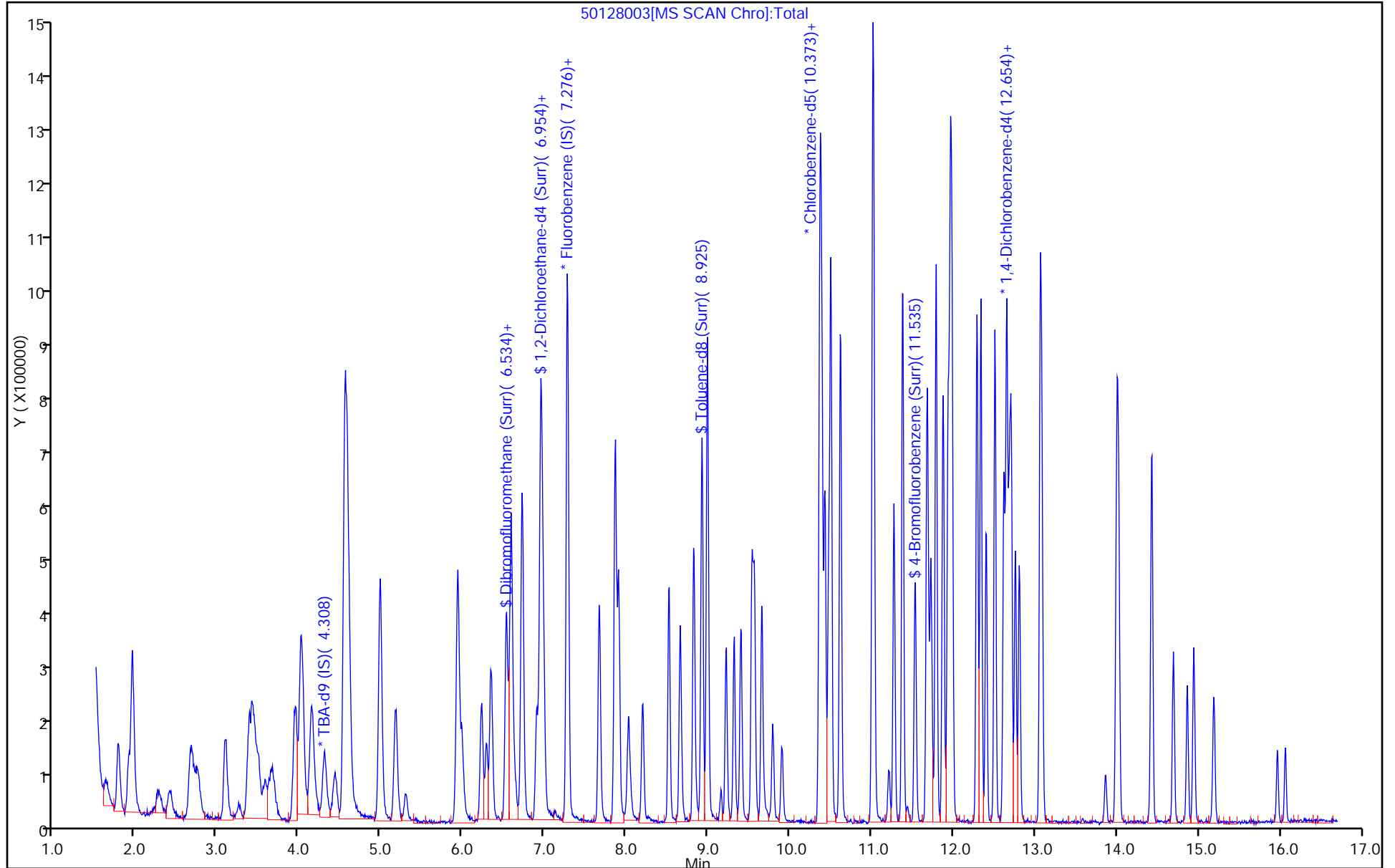
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13  
 Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 12/15/2014 16:57  
 Lab File ID: 50128003.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	0.2998	0.2760	0.1000	9.20	10.0	-8.0	20.0
Chloromethane	Ave	0.5915	0.4885	0.1000	8.26	10.0	-17.4	20.0
Vinyl chloride	Ave	0.4061	0.3788	0.1000	9.33	10.0	-6.7	20.0
Bromomethane	Ave	0.1215	0.1531	0.0500	12.6	10.0	26.0*	20.0
Chloroethane	Ave	0.2011	0.1907	0.0500	9.48	10.0	-5.2	20.0
Dichlorofluoromethane	Ave	0.3999	0.4012	0.0100	10.0	10.0	0.3	20.0
Trichlorofluoromethane	Ave	0.2533	0.3362	0.1000	13.3	10.0	32.7*	20.0
Ethyl ether	Ave	0.3601	0.3224	0.0100	8.95	10.0	-10.5	20.0
Acrolein	Ave	0.0539	0.0328	0.0100	18.2	30.0	-39.2*	20.0
1,1-Dichloroethene	Ave	0.2724	0.2930	0.1000	10.8	10.0	7.6	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2758	0.3052	0.1000	11.1	10.0	10.7	20.0
Acetone	Ave	0.1568	0.2248	0.0500	28.7	20.0	43.4*	20.0
Iodomethane	Ave	0.3488	0.4381	0.0100	12.6	10.0	25.6*	20.0
Carbon disulfide	Ave	0.5280	0.5488	0.1000	10.4	10.0	3.9	20.0
Allyl chloride	Ave	0.1537	0.1494	0.0100	9.72	10.0	-2.8	20.0
Methyl acetate	Ave	0.4553	0.3966	0.1000	43.6	50.0	-12.9	20.0
Methylene Chloride	Lin2		0.3436	0.1000	10.5	10.0	4.8	20.0
tert-Butyl alcohol	Ave	1.337	1.367	0.0100	102	100	2.3	20.0
Acrylonitrile	Ave	0.2098	0.1739	0.0100	82.9	100	-17.1	20.0
trans-1,2-Dichloroethene	Ave	0.2757	0.3323	0.1000	12.0	10.0	20.5*	20.0
Methyl tert-butyl ether	Ave	0.7145	0.7605	0.1000	10.6	10.0	6.4	20.0
Hexane	Ave	0.6980	0.6430	0.0100	9.21	10.0	-7.9	20.0
1,1-Dichloroethane	Ave	0.6414	0.6638	0.2000	10.3	10.0	3.5	20.0
2,2-Dichloropropane	Ave	0.1700	0.2483	0.0100	14.6	10.0	46.0*	20.0
cis-1,2-Dichloroethene	Ave	0.2981	0.3478	0.1000	11.7	10.0	16.7	20.0
2-Butanone (MEK)	Ave	0.2466	0.2837	0.0500	23.0	20.0	15.0	20.0
Bromochloromethane	Ave	0.1243	0.1455	0.0100	11.7	10.0	17.0	20.0
Tetrahydrofuran	Ave	0.1876	0.1386	0.0100	14.8	20.0	-26.1*	20.0
Chloroform	Ave	0.4850	0.5267	0.2000	10.9	10.0	8.6	20.0
1,1,1-Trichloroethane	Ave	0.3147	0.3907	0.1000	12.4	10.0	24.2*	20.0
Cyclohexane	Ave	0.8843	0.7574	0.1000	8.57	10.0	-14.3	20.0
Carbon tetrachloride	Ave	0.2733	0.3266	0.1000	12.0	10.0	19.5	20.0
1,1-Dichloropropene	Ave	0.3970	0.4532	0.0100	11.4	10.0	14.2	20.0
Isobutyl alcohol	Ave	0.0144	0.0114	0.0100	199	250	-20.3*	20.0
Benzene	Ave	1.236	1.320	0.5000	10.7	10.0	6.8	20.0
1,2-Dichloroethane	Ave	0.4801	0.4911	0.1000	10.2	10.0	2.3	20.0
n-Heptane	Ave	0.7079	0.6190	0.0100	8.74	10.0	-12.6	20.0
Trichloroethene	Ave	0.2647	0.3115	0.2000	11.8	10.0	17.7	20.0
Methylcyclohexane	Ave	0.5067	0.5296	0.1000	10.5	10.0	4.5	20.0
1,2-Dichloropropane	Ave	0.3804	0.3562	0.1000	9.36	10.0	-6.4	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13  
 Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 12/15/2014 16:57  
 Lab File ID: 50128003.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.1569	0.1732	0.0100	11.0	10.0	10.4	20.0
1,4-Dioxane	Ave	0.0028	0.0023*	0.0100	160	200	-20.2*	20.0
Bromodichloromethane	Ave	0.3238	0.3275	0.2000	10.1	10.0	1.1	20.0
cis-1,3-Dichloropropene	Ave	0.3695	0.4008	0.2000	10.8	10.0	8.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	2.160	2.029	0.1000	18.8	20.0	-6.1	20.0
Toluene	Ave	5.309	5.981	0.4000	11.3	10.0	12.7	20.0
trans-1,3-Dichloropropene	Ave	1.229	1.474	0.1000	12.0	10.0	20.0	20.0
Ethyl methacrylate	Ave	1.464	1.436	0.0100	9.81	10.0	-1.9	20.0
1,1,2-Trichloroethane	Ave	1.042	1.119	0.1000	10.7	10.0	7.4	20.0
Tetrachloroethene	Ave	0.9790	1.060	0.2000	10.8	10.0	8.3	20.0
1,3-Dichloropropane	Ave	2.006	2.030	0.0100	10.1	10.0	1.2	20.0
2-Hexanone	Ave	1.729	1.580	0.1000	18.3	20.0	-8.6	20.0
Dibromochloromethane	Ave	0.7658	0.8670	0.1000	11.3	10.0	13.2	20.0
1,2-Dibromoethane (EDB)	Ave	0.9660	1.015	0.1000	10.5	10.0	5.1	20.0
3-Chlorobenzotrifluoride	Ave	1.745	1.881	0.0100	10.8	10.0	7.8	20.0
Chlorobenzene	Ave	3.229	3.864	0.5000	12.0	10.0	19.7	20.0
4-Chlorobenzotrifluoride	Ave	1.631	1.820	0.0100	11.2	10.0	11.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9850	1.085	0.0100	11.0	10.0	10.2	20.0
Ethylbenzene	Ave	1.828	2.035	0.1000	11.1	10.0	11.3	20.0
m-Xylene & p-Xylene	Ave	2.226	2.520	0.1000	11.3	10.0	13.2	20.0
o-Xylene	Ave	2.164	2.405	0.3000	11.1	10.0	11.1	20.0
Styrene	Ave	3.642	3.856	0.3000	10.6	10.0	5.9	20.0
Bromoform	Ave	0.4840	0.4869	0.1000	10.1	10.0	0.6	20.0
2-Chlorobenzotrifluoride	Ave	1.670	1.795	0.0100	10.7	10.0	7.5	20.0
Isopropylbenzene	Ave	5.400	6.187	0.1000	11.5	10.0	14.6	20.0
1,1,2,2-Tetrachloroethane	Ave	1.464	1.487	0.3000	10.2	10.0	1.6	20.0
Bromobenzene	Ave	0.8995	1.014	0.0100	11.3	10.0	12.7	20.0
1,2,3-Trichloropropane	Ave	0.3271	0.3335	0.0100	10.2	10.0	2.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.4491	0.4011	0.0100	8.93	10.0	-10.7	20.0
N-Propylbenzene	Ave	1.062	1.285	0.0100	12.1	10.0	21.0*	20.0
2-Chlorotoluene	Ave	0.8959	1.075	0.0100	12.0	10.0	20.0	20.0
3-Chlorotoluene	Ave	0.9551	1.072	0.0100	11.2	10.0	12.2	20.0
1,3,5-Trimethylbenzene	Ave	3.181	3.630	0.0100	11.4	10.0	14.1	20.0
4-Chlorotoluene	Ave	0.996	1.127	0.0100	11.3	10.0	13.2	20.0
tert-Butylbenzene	Ave	2.610	3.002	0.0100	11.5	10.0	15.0	20.0
1,2,4-Trimethylbenzene	Ave	3.269	3.618	0.0100	11.1	10.0	10.7	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9007	0.9407	0.0100	10.4	10.0	4.4	20.0
sec-Butylbenzene	Ave	3.761	4.173	0.0100	11.1	10.0	11.0	20.0
1,3-Dichlorobenzene	Ave	1.698	1.930	0.6000	11.4	10.0	13.7	20.0
4-Isopropyltoluene	Ave	3.029	3.562	0.0100	11.8	10.0	17.6	20.0
1,4-Dichlorobenzene	Ave	1.753	2.020	0.5000	11.5	10.0	15.3	20.0



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-131906/3 Calibration Date: 01/28/2015 09:13  
 Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 12/15/2014 16:57  
 Lab File ID: 50128003.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4-Dichlorobenzotrifluoride	Ave	0.8452	0.7967	0.0100	9.43	10.0	-5.7	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9219	0.9395	0.0100	10.2	10.0	1.9	20.0
n-Butylbenzene	Ave	2.768	3.102	0.0100	11.2	10.0	12.1	20.0
1,2-Dichlorobenzene	Ave	1.576	1.764	0.4000	11.2	10.0	12.0	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1429	0.1505	0.0500	10.5	10.0	5.3	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.9929	1.116	0.0100	33.7	30.0	12.4	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.9468	1.035	0.0100	21.9	20.0	9.3	20.0
1,2,4-Trichlorobenzene	Ave	0.6536	0.6714	0.2000	10.3	10.0	2.7	20.0
Hexachlorobutadiene	Ave	0.3100	0.3576	0.0100	11.5	10.0	15.4	20.0
Naphthalene	Ave	1.745	1.760	0.0100	10.1	10.0	0.9	20.0
1,2,3-Trichlorobenzene	Ave	0.5125	0.5139	0.0100	10.0	10.0	0.3	20.0
2,4,5-Trichlorotoluene	Ave	0.2177	0.2239	0.0100	10.3	10.0	2.8	20.0
2,3,6-Trichlorotoluene	Ave	0.1994	0.2190	0.0100	11.0	10.0	9.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2128	0.2372		11.1	10.0	11.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3494	0.3410		9.76	10.0	-2.4	20.0
Toluene-d8 (Surr)	Ave	4.159	4.461		10.7	10.0	7.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.585	1.665		10.5	10.0	5.0	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 28-Jan-2015 09:13:30 ALS Bottle#: 2 Worklist Smp#: 3  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 180-0005445-003  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub20  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 12:12:10 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last Ical File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 10:42:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.308	4.308	0.000	91	174016	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.276	7.276	0.000	99	474967	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.367	0.000	98	108247	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	94	151657	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.534	6.534	0.000	75	112644	50.0	55.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.899	0.000	93	161974	50.0	48.8	
\$ 7 Toluene-d8 (Surr)	98	8.925	8.925	0.000	94	482906	50.0	53.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.535	0.000	85	180192	50.0	52.5	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	94	131073	50.0	46.0	
12 Chloromethane	50	1.783	1.783	0.000	99	232029	50.0	41.3	
13 Vinyl chloride	62	1.911	1.911	0.000	97	179910	50.0	46.6	
14 Butadiene	39	1.959	1.959	0.000	97	222841	50.0	40.6	
15 Bromomethane	94	2.270	2.270	0.000	91	72713	50.0	63.0	
16 Chloroethane	64	2.416	2.416	0.000	97	90560	50.0	47.4	
17 Dichlorofluoromethane	67	2.665	2.665	0.000	96	190553	50.0	50.2	
18 Trichlorofluoromethane	101	2.702	2.702	0.000	95	159702	50.0	66.4	
20 Ethyl ether	59	3.091	3.091	0.000	97	153115	50.0	44.8	
21 Acrolein	56	3.255	3.255	0.000	98	46673	150.0	91.2	
22 1,1-Dichloroethene	96	3.383	3.383	0.000	96	139141	50.0	53.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.444	0.000	93	144955	50.0	55.3	
24 Acetone	43	3.499	3.499	0.000	97	213498	100.0	143.4	
25 Iodomethane	142	3.584	3.584	0.000	99	208103	50.0	62.8	
26 Carbon disulfide	76	3.675	3.675	0.000	99	260647	50.0	52.0	
28 3-Chloro-1-propene	76	3.955	3.955	0.000	90	70957	50.0	48.6	
30 Methyl acetate	43	4.022	4.022	0.000	100	941872	250.0	217.8	
31 Methylene Chloride	84	4.156	4.156	0.000	92	163208	50.0	52.4	
32 2-Methyl-2-propanol	59	4.435	4.435	0.000	91	118968	500.0	511.4	
33 Acrylonitrile	53	4.557	4.557	0.000	97	825806	500.0	414.3	
34 trans-1,2-Dichloroethene	96	4.563	4.563	0.000	93	157807	50.0	60.2	
35 Methyl tert-butyl ether	73	4.588	4.588	0.000	95	361198	50.0	53.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.983	4.983	0.000	96	305408	50.0	46.1	
37 1,1-Dichloroethane	63	5.178	5.178	0.000	96	315261	50.0	51.7	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	67	117915	50.0	73.0	
45 cis-1,2-Dichloroethene	96	5.938	5.938	0.000	85	165202	50.0	58.3	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	97	269525	100.0	115.0	
49 Chlorobromomethane	128	6.224	6.224	0.000	86	69102	50.0	58.5	
51 Tetrahydrofuran	42	6.285	6.285	0.000	94	131653	100.0	73.9	
52 Chloroform	83	6.352	6.352	0.000	97	250156	50.0	54.3	
53 1,1,1-Trichloroethane	97	6.534	6.534	0.000	96	185584	50.0	62.1	
54 Cyclohexane	56	6.589	6.589	0.000	96	359760	50.0	42.8	
56 Carbon tetrachloride	117	6.717	6.717	0.000	72	155112	50.0	59.8	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	87	215243	50.0	57.1	
57 Isobutyl alcohol	41	6.942	6.942	0.000	96	135896	1250.0	996.0	
58 Benzene	78	6.954	6.954	0.000	97	627004	50.0	53.4	
59 1,2-Dichloroethane	62	6.990	6.990	0.000	96	233257	50.0	51.1	
62 n-Heptane	43	7.276	7.276	0.000	97	293990	50.0	43.7	
64 Trichloroethene	130	7.666	7.666	0.000	97	147930	50.0	58.8	
66 Methylcyclohexane	83	7.860	7.860	0.000	97	251534	50.0	52.3	
67 1,2-Dichloropropane	63	7.903	7.903	0.000	93	169194	50.0	46.8	
68 Dibromomethane	93	8.031	8.031	0.000	95	82281	50.0	55.2	
70 1,4-Dioxane	88	8.049	8.049	0.000	92	21590	1000.0	798.4	
71 Dichlorobromomethane	83	8.195	8.195	0.000	97	155551	50.0	50.6	
73 2-Chloroethyl vinyl ether	63	8.524	8.524	0.000	88	183352	100.0	121.5	
74 cis-1,3-Dichloropropene	75	8.657	8.657	0.000	87	190381	50.0	54.2	
75 4-Methyl-2-pentanone (MIBK)	43	8.822	8.822	0.000	99	439174	100.0	93.9	
76 Toluene	91	8.992	8.992	0.000	98	647393	50.0	56.3	
77 trans-1,3-Dichloropropene	75	9.223	9.223	0.000	96	159587	50.0	60.0	
78 Ethyl methacrylate	69	9.320	9.320	0.000	93	155410	50.0	49.0	
79 1,1,2-Trichloroethane	97	9.400	9.400	0.000	93	121117	50.0	53.7	
80 Tetrachloroethene	164	9.539	9.539	0.000	94	114762	50.0	54.1	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	96	219752	50.0	50.6	
82 2-Hexanone	43	9.655	9.655	0.000	98	342121	100.0	91.4	
84 Chlorodibromomethane	129	9.789	9.789	0.000	90	93851	50.0	56.6	
85 Ethylene Dibromide	107	9.904	9.904	0.000	99	109893	50.0	52.5	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	94	203559	50.0	53.9	
87 Chlorobenzene	112	10.391	10.391	0.000	92	418309	50.0	59.8	
88 4-Chlorobenzotrifluoride	180	10.434	10.434	0.000	95	197046	50.0	55.8	
89 1,1,1,2-Tetrachloroethane	131	10.476	10.476	0.000	92	117497	50.0	55.1	
90 Ethylbenzene	106	10.501	10.501	0.000	99	220317	50.0	55.7	
91 m-Xylene & p-Xylene	106	10.622	10.622	0.000	98	272822	50.0	56.6	
92 o-Xylene	106	11.012	11.012	0.000	99	260333	50.0	55.6	
93 Styrene	104	11.030	11.030	0.000	94	417402	50.0	52.9	
94 Bromoform	173	11.218	11.218	0.000	94	52701	50.0	50.3	
96 2-Chlorobenzotrifluoride	180	11.273	11.273	0.000	94	194286	50.0	53.7	
97 Isopropylbenzene	105	11.383	11.383	0.000	97	669732	50.0	57.3	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	160975	50.0	50.8	
100 Bromobenzene	156	11.687	11.687	0.000	97	153791	50.0	56.4	
101 1,2,3-Trichloropropane	110	11.723	11.723	0.000	89	50583	50.0	51.0	
102 trans-1,4-Dichloro-2-buten	53	11.729	11.729	0.000	71	60824	50.0	44.6	
103 N-Propylbenzene	120	11.790	11.790	0.000	99	194862	50.0	60.5	
104 2-Chlorotoluene	126	11.875	11.875	0.000	95	162980	50.0	60.0	
105 3-Chlorotoluene	126	11.936	11.936	0.000	95	162540	50.0	56.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.961	0.000	94	550536	50.0	57.1	
107 4-Chlorotoluene	126	11.985	11.985	0.000	98	170893	50.0	56.6	
108 tert-Butylbenzene	119	12.289	12.289	0.000	94	455327	50.0	57.5	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	99	548723	50.0	55.3	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	97	142669	50.0	52.2	
112 sec-Butylbenzene	105	12.508	12.508	0.000	96	632866	50.0	55.5	
113 1,3-Dichlorobenzene	146	12.624	12.624	0.000	96	292773	50.0	56.9	
114 4-Isopropyltoluene	119	12.654	12.654	0.000	97	540215	50.0	58.8	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	94	306400	50.0	57.6	
116 2,4-Dichloro-1-(trifluorom	214	12.758	12.758	0.000	95	120826	50.0	47.1	
118 2,5-Dichlorobenzotrifluori	214	12.806	12.806	0.000	99	142483	50.0	51.0	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	470490	50.0	56.0	
121 1,2-Dichlorobenzene	146	13.086	13.086	0.000	95	267560	50.0	56.0	
122 1,2-Dibromo-3-Chloropropan	75	13.865	13.865	0.000	69	22819	50.0	52.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	98	507716	150.0	168.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.431	14.431	0.000	99	313881	100.0	109.3	
126 1,2,4-Trichlorobenzene	180	14.692	14.692	0.000	93	101827	50.0	51.4	
127 Hexachlorobutadiene	225	14.862	14.862	0.000	93	54231	50.0	57.7	
128 Naphthalene	128	14.942	14.942	0.000	98	266869	50.0	50.4	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	77937	50.0	50.1	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	97	33948	50.0	51.4	
130 2,3,6-Trichlorotoluene	159	16.061	16.061	0.000	95	33206	50.0	54.9	
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	112.2	
S 134 1,2-Dichloroethene, Total	96				0		100.0	118.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	114.2	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

VOA8260VOAPRI_00097	Amount Added: 2.00	Units: uL	
voaWeemixpri_00001	Amount Added: 2.00	Units: uL	
voaWket2nd Re_00001	Amount Added: 2.00	Units: uL	
VOA2CEVE2ND_00005	Amount Added: 2.00	Units: uL	
voaWAcropri R_00006	Amount Added: 6.00	Units: uL	
VOA8260INT_00027	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128003.D

Injection Date: 28-Jan-2015 09:13:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

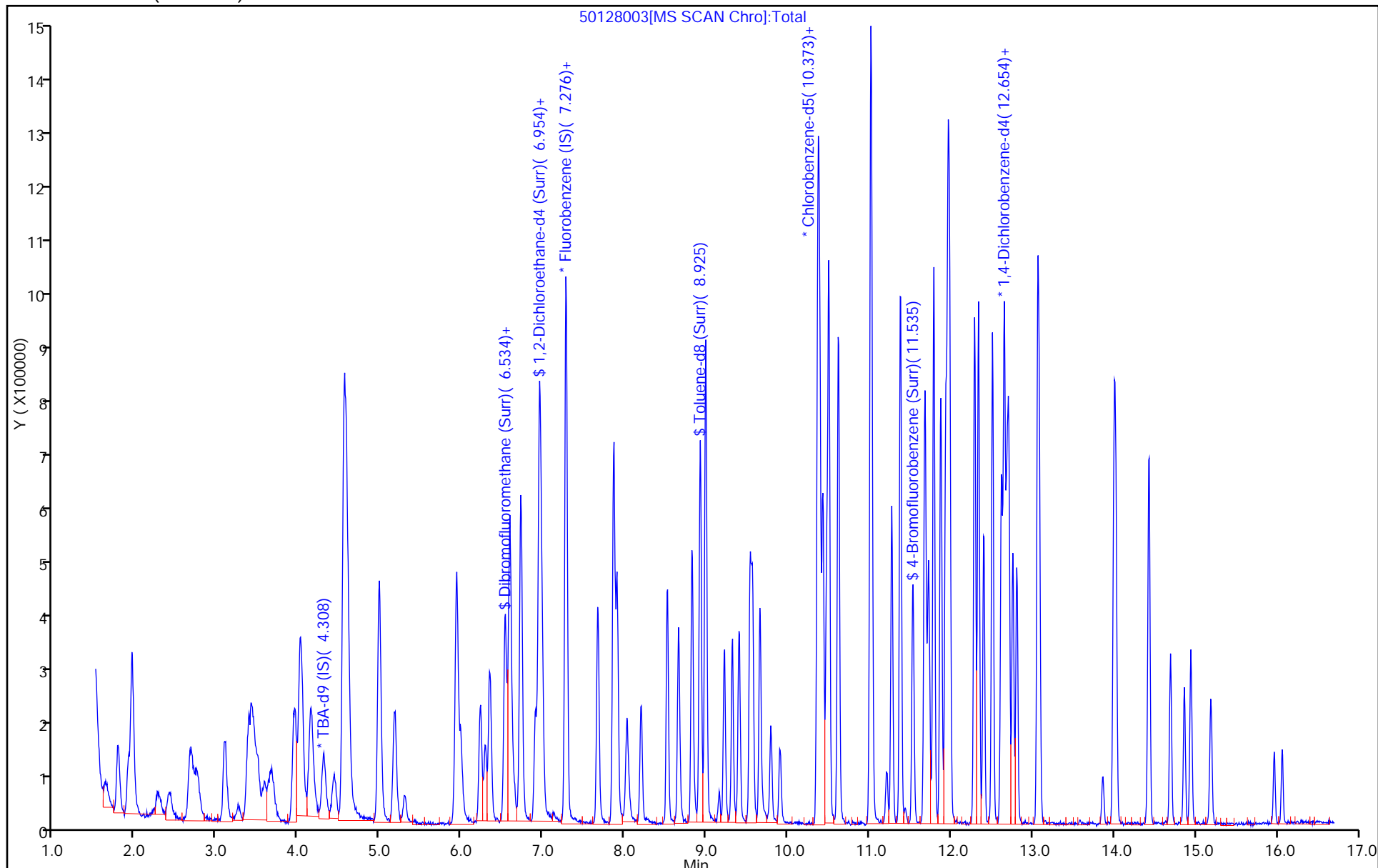
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-132193/2 Calibration Date: 01/30/2015 09:49  
 Instrument ID: CHHP5 Calib Start Date: 11/18/2014 14:22  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 11/18/2014 16:46  
 Lab File ID: 50130002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1588	0.1662	0.0100	20.9	20.0	4.6	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130002.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 30-Jan-2015 09:49:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 180-0005479-002  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub54  
 Method: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Jan-2015 14:50:58 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: fergusond

Date: 30-Jan-2015 10:18:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.308	4.308	0.000	89	156542	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	95	473422	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	98	106847	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	148407	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.523	6.523	0.000	75	94471	50.0	46.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	93	133558	50.0	40.4	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	94	396183	50.0	44.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	85	149061	50.0	44.0	
11 Dichlorodifluoromethane	85	1.650	1.650	0.000	97	156840	50.0	55.3	
12 Chloromethane	50	1.790	1.790	0.000	99	208538	50.0	37.2	
13 Vinyl chloride	62	1.911	1.911	0.000	97	160912	50.0	41.8	
14 Butadiene	39	1.960	1.960	0.000	99	218890	50.0	40.0	
15 Bromomethane	94	2.270	2.270	0.000	91	48177	50.0	41.9	
16 Chloroethane	64	2.422	2.422	0.000	96	85058	50.0	44.7	
17 Dichlorofluoromethane	67	2.666	2.666	0.000	97	165974	50.0	43.8	
18 Trichlorofluoromethane	101	2.696	2.696	0.000	98	131100	50.0	54.7	
20 Ethyl ether	59	3.092	3.092	0.000	97	134562	50.0	39.5	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	93	134423	50.0	52.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.438	3.438	0.000	94	140594	50.0	53.8	
24 Acetone	43	3.505	3.505	0.000	97	127732	100.0	86.0	
25 Iodomethane	142	3.633	3.633	0.000	98	175027	50.0	53.0	
26 Carbon disulfide	76	3.676	3.676	0.000	100	288550	50.0	57.7	
28 3-Chloro-1-propene	76	3.937	3.937	0.000	87	75102	50.0	51.6	
30 Methyl acetate	43	4.022	4.022	0.000	100	929846	250.0	215.7	
31 Methylene Chloride	84	4.144	4.144	0.000	95	141055	50.0	44.7	
32 2-Methyl-2-propanol	59	4.430	4.430	0.000	88	96515	500.0	461.2	
33 Acrylonitrile	53	4.552	4.552	0.000	97	692227	500.0	348.4	
34 trans-1,2-Dichloroethene	96	4.564	4.564	0.000	65	134523	50.0	51.5	
35 Methyl tert-butyl ether	73	4.594	4.594	0.000	93	290613	50.0	43.0	
36 Hexane	57	4.984	4.984	0.000	95	258842	50.0	39.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.172	0.000	97	275096	50.0	45.3	
38 Vinyl acetate	43	5.294	5.294	0.000	98	830252	100.0	142.6	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	63	103700	50.0	64.4	
45 cis-1,2-Dichloroethene	96	5.945	5.945	0.000	86	140095	50.0	49.6	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	97	175126	100.0	75.0	
49 Chlorobromomethane	128	6.231	6.231	0.000	85	60521	50.0	51.4	
51 Tetrahydrofuran	42	6.279	6.279	0.000	92	105172	100.0	59.2	
52 Chloroform	83	6.346	6.346	0.000	97	224009	50.0	48.8	
53 1,1,1-Trichloroethane	97	6.529	6.529	0.000	93	162207	50.0	54.4	
54 Cyclohexane	56	6.584	6.584	0.000	96	326734	50.0	39.0	
56 Carbon tetrachloride	117	6.717	6.717	0.000	74	154524	50.0	59.7	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	88	182608	50.0	48.6	
57 Isobutyl alcohol	41	6.943	6.943	0.000	90	108667	1250.0	799.0	
58 Benzene	78	6.955	6.955	0.000	97	552075	50.0	47.2	
59 1,2-Dichloroethane	62	6.979	6.979	0.000	96	208015	50.0	45.8	
62 n-Heptane	43	7.277	7.277	0.000	78	245904	50.0	36.7	
64 Trichloroethene	130	7.666	7.666	0.000	96	127150	50.0	50.7	
66 Methylcyclohexane	83	7.861	7.861	0.000	97	218537	50.0	45.5	
67 1,2-Dichloropropane	63	7.904	7.904	0.000	94	149891	50.0	41.6	
68 Dibromomethane	93	8.019	8.019	0.000	97	70451	50.0	47.4	
70 1,4-Dioxane	88	8.056	8.056	0.000	95	22457	1000.0	833.2	
71 Dichlorobromomethane	83	8.196	8.196	0.000	97	148172	50.0	48.3	
73 2-Chloroethyl vinyl ether	63	8.518	8.518	0.000	88	157318	100.0	104.6	
74 cis-1,3-Dichloropropene	75	8.658	8.658	0.000	88	166335	50.0	47.5	
75 4-Methyl-2-pentanone (MIBK)	43	8.822	8.822	0.000	99	333635	100.0	72.3	
76 Toluene	91	8.993	8.993	0.000	97	565627	50.0	49.9	
77 trans-1,3-Dichloropropene	75	9.218	9.218	0.000	97	135733	50.0	51.7	
78 Ethyl methacrylate	69	9.315	9.315	0.000	92	121295	50.0	38.8	
79 1,1,2-Trichloroethane	97	9.394	9.394	0.000	95	105175	50.0	47.3	
80 Tetrachloroethene	164	9.534	9.534	0.000	95	102351	50.0	48.9	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	95	194642	50.0	45.4	
82 2-Hexanone	43	9.656	9.656	0.000	97	267483	100.0	72.4	
84 Chlorodibromomethane	129	9.796	9.796	0.000	92	89439	50.0	54.7	
85 Ethylene Dibromide	107	9.899	9.899	0.000	95	98220	50.0	47.6	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	90	180745	50.0	48.5	
87 Chlorobenzene	112	10.392	10.392	0.000	93	363673	50.0	52.7	
88 4-Chlorobenzotrifluoride	180	10.428	10.428	0.000	97	167683	50.0	48.1	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.471	0.000	92	113325	50.0	53.8	
90 Ethylbenzene	106	10.501	10.501	0.000	99	192619	50.0	49.3	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	98	242914	50.0	51.1	
92 o-Xylene	106	11.012	11.012	0.000	94	225436	50.0	48.7	
93 Styrene	104	11.025	11.025	0.000	86	378550	50.0	48.6	
94 Bromoform	173	11.213	11.213	0.000	95	52978	50.0	51.2	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	94	176098	50.0	49.3	
97 Isopropylbenzene	105	11.377	11.377	0.000	97	586517	50.0	50.8	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	138970	50.0	44.4	
100 Bromobenzene	156	11.682	11.682	0.000	97	132283	50.0	49.5	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	88	46011	50.0	47.4	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.730	0.000	70	53211	50.0	39.9	
103 N-Propylbenzene	120	11.785	11.785	0.000	99	163912	50.0	52.0	
104 2-Chlorotoluene	126	11.876	11.876	0.000	95	137599	50.0	51.7	
105 3-Chlorotoluene	126	11.937	11.937	0.000	96	159884	50.0	56.4	



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	11.961	11.961	0.000	94	491090	50.0	52.0	
107 4-Chlorotoluene	126	11.980	11.980	0.000	98	149945	50.0	50.7	
108 tert-Butylbenzene	119	12.290	12.290	0.000	94	398092	50.0	51.4	
110 1,2,4-Trimethylbenzene	105	12.332	12.332	0.000	98	504787	50.0	52.0	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	97	130081	50.0	48.7	
112 sec-Butylbenzene	105	12.509	12.509	0.000	96	561225	50.0	50.3	
113 1,3-Dichlorobenzene	146	12.618	12.618	0.000	97	249805	50.0	49.6	
114 4-Isopropyltoluene	119	12.649	12.649	0.000	97	488871	50.0	54.4	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	91	252216	50.0	48.5	
116 2,4-Dichloro-1-(trifluorom	214	12.758	12.758	0.000	97	119683	50.0	47.7	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	98	128792	50.0	47.1	
120 n-Butylbenzene	91	13.062	13.062	0.000	99	410962	50.0	50.0	
121 1,2-Dichlorobenzene	146	13.081	13.081	0.000	94	237099	50.0	50.7	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.859	0.000	71	19095	50.0	45.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.012	14.012	0.000	98	443265	150.0	150.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.425	0.000	99	279536	100.0	99.5	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	94	87269	50.0	45.0	
127 Hexachlorobutadiene	225	14.863	14.863	0.000	95	46430	50.0	50.5	
128 Naphthalene	128	14.942	14.942	0.000	97	211485	50.0	40.8	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	96	69205	50.0	45.5	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	96	27222	50.0	42.1	
130 2,3,6-Trichlorotoluene	159	16.062	16.062	0.000	92	26409	50.0	44.6	
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	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	99.8	
S 134 1,2-Dichloroethene, Total	96				0		100.0	101.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	99.2	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWVOA-Pri R_00001	Amount Added: 2.00	Units: uL	
voaWVApri Res_00001	Amount Added: 4.00	Units: uL	
voaEEmix2ndRe_00001	Amount Added: 2.00	Units: uL	
VOAKETONEPRI_00003	Amount Added: 2.00	Units: uL	
voaW2-cle2ndR_00004	Amount Added: 2.00	Units: uL	
VOA8260INT_00027	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130002.D

Injection Date: 30-Jan-2015 09:49:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

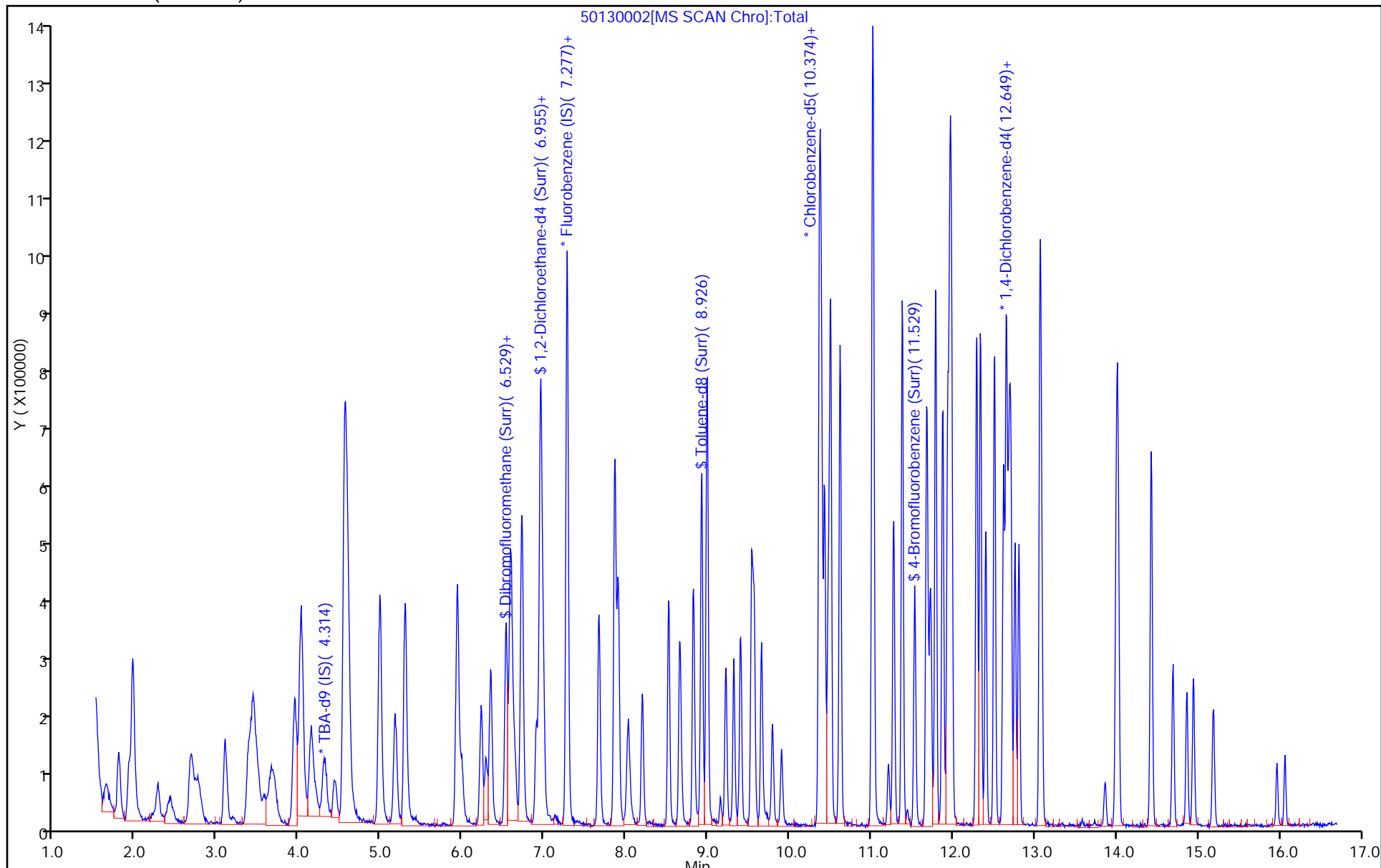
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-132193/2 Calibration Date: 01/30/2015 09:49  
 Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 12/15/2014 16:57  
 Lab File ID: 50130002.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	0.2998	0.3313	0.1000	11.1	10.0	10.5	20.0
Chloromethane	Ave	0.5915	0.4405	0.1000	7.45	10.0	-25.5*	20.0
Vinyl chloride	Ave	0.4061	0.3399	0.1000	8.37	10.0	-16.3	20.0
Bromomethane	Ave	0.1215	0.1018	0.0500	8.38	10.0	-16.2	20.0
Chloroethane	Ave	0.2011	0.1797	0.0500	8.94	10.0	-10.6	20.0
Dichlorofluoromethane	Ave	0.3999	0.3506	0.0100	8.77	10.0	-12.3	20.0
Trichlorofluoromethane	Ave	0.2533	0.2769	0.1000	10.9	10.0	9.3	20.0
Ethyl ether	Ave	0.3601	0.2842	0.0100	7.89	10.0	-21.1*	20.0
1,1-Dichloroethene	Ave	0.2724	0.2839	0.1000	10.4	10.0	4.2	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2758	0.2970	0.1000	10.8	10.0	7.7	20.0
Acetone	Ave	0.1568	0.1349	0.0500	17.2	20.0	-14.0	20.0
Iodomethane	Ave	0.3488	0.3697	0.0100	10.6	10.0	6.0	20.0
Carbon disulfide	Ave	0.5280	0.6095	0.1000	11.5	10.0	15.4	20.0
Allyl chloride	Ave	0.1537	0.1586	0.0100	10.3	10.0	3.2	20.0
Methyl acetate	Ave	0.4553	0.3928	0.1000	43.1	50.0	-13.7	20.0
Methylene Chloride	Lin2		0.2980	0.1000	8.94	10.0	-10.6	20.0
tert-Butyl alcohol	Ave	1.337	1.233	0.0100	92.2	100	-7.8	20.0
Acrylonitrile	Ave	0.2098	0.1462	0.0100	69.7	100	-30.3*	20.0
trans-1,2-Dichloroethene	Ave	0.2757	0.2842	0.1000	10.3	10.0	3.0	20.0
Methyl tert-butyl ether	Ave	0.7145	0.6139	0.1000	8.59	10.0	-14.1	20.0
Hexane	Ave	0.6980	0.5468	0.0100	7.83	10.0	-21.7*	20.0
1,1-Dichloroethane	Ave	0.6414	0.5811	0.2000	9.06	10.0	-9.4	20.0
Vinyl acetate	Ave	0.6151	0.8769	0.0100	28.5	20.0	42.6*	20.0
2,2-Dichloropropane	Ave	0.1700	0.2190	0.0100	12.9	10.0	28.8*	20.0
cis-1,2-Dichloroethene	Ave	0.2981	0.2959	0.1000	9.93	10.0	-0.7	20.0
2-Butanone (MEK)	Ave	0.2466	0.1850	0.0500	15.0	20.0	-25.0*	20.0
Bromochloromethane	Ave	0.1243	0.1278	0.0100	10.3	10.0	2.8	20.0
Tetrahydrofuran	Ave	0.1876	0.1111	0.0100	11.8	20.0	-40.8*	20.0
Chloroform	Ave	0.4850	0.4732	0.2000	9.76	10.0	-2.4	20.0
1,1,1-Trichloroethane	Ave	0.3147	0.3426	0.1000	10.9	10.0	8.9	20.0
Cyclohexane	Ave	0.8843	0.6902	0.1000	7.80	10.0	-22.0*	20.0
Carbon tetrachloride	Ave	0.2733	0.3264	0.1000	11.9	10.0	19.4	20.0
1,1-Dichloropropene	Ave	0.3970	0.3857	0.0100	9.72	10.0	-2.8	20.0
Isobutyl alcohol	Ave	0.0144	0.0092*	0.0100	160	250	-36.1*	20.0
Benzene	Ave	1.236	1.166	0.5000	9.43	10.0	-5.7	20.0
1,2-Dichloroethane	Ave	0.4801	0.4394	0.1000	9.15	10.0	-8.5	20.0
n-Heptane	Ave	0.7079	0.5194	0.0100	7.34	10.0	-26.6*	20.0
Trichloroethene	Ave	0.2647	0.2686	0.2000	10.1	10.0	1.5	20.0
Methylcyclohexane	Ave	0.5067	0.4616	0.1000	9.11	10.0	-8.9	20.0
1,2-Dichloropropane	Ave	0.3804	0.3166	0.1000	8.32	10.0	-16.8	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-132193/2 Calibration Date: 01/30/2015 09:49  
 Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 12/15/2014 16:57  
 Lab File ID: 50130002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.1569	0.1488	0.0100	9.49	10.0	-5.1	20.0
1,4-Dioxane	Ave	0.0028	0.0024*	0.0100	167	200	-16.7	20.0
Bromodichloromethane	Ave	0.3238	0.3130	0.2000	9.66	10.0	-3.4	20.0
cis-1,3-Dichloropropene	Ave	0.3695	0.3514	0.2000	9.51	10.0	-4.9	20.0
4-Methyl-2-pentanone (MIBK)	Ave	2.160	1.561	0.1000	14.5	20.0	-27.7*	20.0
Toluene	Ave	5.309	5.294	0.4000	9.97	10.0	-0.3	20.0
trans-1,3-Dichloropropene	Ave	1.229	1.270	0.1000	10.3	10.0	3.4	20.0
Ethyl methacrylate	Ave	1.464	1.135	0.0100	7.76	10.0	-22.4*	20.0
1,1,2-Trichloroethane	Ave	1.042	0.9844	0.1000	9.45	10.0	-5.5	20.0
Tetrachloroethene	Ave	0.9790	0.9579	0.2000	9.79	10.0	-2.1	20.0
1,3-Dichloropropane	Ave	2.006	1.822	0.0100	9.08	10.0	-9.2	20.0
2-Hexanone	Ave	1.729	1.252	0.1000	14.5	20.0	-27.6*	20.0
Dibromochloromethane	Ave	0.7658	0.8371	0.1000	10.9	10.0	9.3	20.0
1,2-Dibromoethane (EDB)	Ave	0.9660	0.9193	0.1000	9.52	10.0	-4.8	20.0
3-Chlorobenzotrifluoride	Ave	1.745	1.692	0.0100	9.69	10.0	-3.1	20.0
Chlorobenzene	Ave	3.229	3.404	0.5000	10.5	10.0	5.4	20.0
4-Chlorobenzotrifluoride	Ave	1.631	1.569	0.0100	9.62	10.0	-3.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.9850	1.061	0.0100	10.8	10.0	7.7	20.0
Ethylbenzene	Ave	1.828	1.803	0.1000	9.86	10.0	-1.4	20.0
m-Xylene & p-Xylene	Ave	2.226	2.273	0.1000	10.2	10.0	2.1	20.0
o-Xylene	Ave	2.164	2.110	0.3000	9.75	10.0	-2.5	20.0
Styrene	Ave	3.642	3.543	0.3000	9.73	10.0	-2.7	20.0
Bromoform	Ave	0.4840	0.4958	0.1000	10.2	10.0	2.4	20.0
2-Chlorobenzotrifluoride	Ave	1.670	1.648	0.0100	9.87	10.0	-1.3	20.0
Isopropylbenzene	Ave	5.400	5.489	0.1000	10.2	10.0	1.6	20.0
1,1,2,2-Tetrachloroethane	Ave	1.464	1.301	0.3000	8.88	10.0	-11.2	20.0
Bromobenzene	Ave	0.8995	0.8914	0.0100	9.91	10.0	-0.9	20.0
1,2,3-Trichloropropane	Ave	0.3271	0.3100	0.0100	9.48	10.0	-5.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.4491	0.3586	0.0100	7.98	10.0	-20.2*	20.0
N-Propylbenzene	Ave	1.062	1.104	0.0100	10.4	10.0	4.0	20.0
2-Chlorotoluene	Ave	0.8959	0.9272	0.0100	10.3	10.0	3.5	20.0
3-Chlorotoluene	Ave	0.9551	1.077	0.0100	11.3	10.0	12.8	20.0
1,3,5-Trimethylbenzene	Ave	3.181	3.309	0.0100	10.4	10.0	4.0	20.0
4-Chlorotoluene	Ave	0.996	1.010	0.0100	10.1	10.0	1.5	20.0
tert-Butylbenzene	Ave	2.610	2.682	0.0100	10.3	10.0	2.8	20.0
1,2,4-Trimethylbenzene	Ave	3.269	3.401	0.0100	10.4	10.0	4.1	20.0
3,4-Dichlorobenzotrifluoride	Ave	0.9007	0.8765	0.0100	9.73	10.0	-2.7	20.0
sec-Butylbenzene	Ave	3.761	3.782	0.0100	10.1	10.0	0.5	20.0
1,3-Dichlorobenzene	Ave	1.698	1.683	0.6000	9.91	10.0	-0.9	20.0
4-Isopropyltoluene	Ave	3.029	3.294	0.0100	10.9	10.0	8.7	20.0
1,4-Dichlorobenzene	Ave	1.753	1.699	0.5000	9.70	10.0	-3.0	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 180-132193/2 Calibration Date: 01/30/2015 09:49  
 Instrument ID: CHHP5 Calib Start Date: 12/15/2014 14:33  
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 12/15/2014 16:57  
 Lab File ID: 50130002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4-Dichlorobenzotrifluoride	Ave	0.8452	0.8065	0.0100	9.54	10.0	-4.6	20.0
2,5-Dichlorobenzotrifluoride	Ave	0.9219	0.8678	0.0100	9.41	10.0	-5.9	20.0
n-Butylbenzene	Ave	2.768	2.769	0.0100	10.0	10.0	0.0	20.0
1,2-Dichlorobenzene	Ave	1.576	1.598	0.4000	10.1	10.0	1.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1429	0.1287	0.0500	9.01	10.0	-9.9	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	0.9929	0.996	0.0100	30.1	30.0	0.3	20.0
2,3- & 3,4- Dichlorotoluene	Ave	0.9468	0.9418	0.0100	19.9	20.0	-0.5	20.0
1,2,4-Trichlorobenzene	Ave	0.6536	0.5880	0.2000	9.00	10.0	-10.0	20.0
Hexachlorobutadiene	Ave	0.3100	0.3129	0.0100	10.1	10.0	0.9	20.0
Naphthalene	Ave	1.745	1.425	0.0100	8.17	10.0	-18.3	20.0
1,2,3-Trichlorobenzene	Ave	0.5125	0.4663	0.0100	9.10	10.0	-9.0	20.0
2,4,5-Trichlorotoluene	Ave	0.2177	0.1834	0.0100	8.43	10.0	-15.7	20.0
2,3,6-Trichlorotoluene	Ave	0.1994	0.1780	0.0100	8.92	10.0	-10.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2128	0.1996		9.38	10.0	-6.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3494	0.2821		8.07	10.0	-19.3	20.0
Toluene-d8 (Surr)	Ave	4.159	3.708		8.92	10.0	-10.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.585	1.395		8.80	10.0	-12.0	20.0

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130002.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 30-Jan-2015 09:49:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 180-0005479-002  
 Operator ID: 001562 Instrument ID: CHHP5  
 Sublist: chrom-MSVOA\_LL\_CHHP5\*sub54  
 Method: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Jan-2015 14:50:58 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: fergusond

Date: 30-Jan-2015 10:18:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.308	4.308	0.000	89	156542	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.271	0.000	95	473422	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	98	106847	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	148407	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.523	6.523	0.000	75	94471	50.0	46.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.900	0.000	93	133558	50.0	40.4	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	94	396183	50.0	44.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.529	0.000	85	149061	50.0	44.0	
11 Dichlorodifluoromethane	85	1.650	1.650	0.000	97	156840	50.0	55.3	
12 Chloromethane	50	1.790	1.790	0.000	99	208538	50.0	37.2	
13 Vinyl chloride	62	1.911	1.911	0.000	97	160912	50.0	41.8	
14 Butadiene	39	1.960	1.960	0.000	99	218890	50.0	40.0	
15 Bromomethane	94	2.270	2.270	0.000	91	48177	50.0	41.9	
16 Chloroethane	64	2.422	2.422	0.000	96	85058	50.0	44.7	
17 Dichlorofluoromethane	67	2.666	2.666	0.000	97	165974	50.0	43.8	
18 Trichlorofluoromethane	101	2.696	2.696	0.000	98	131100	50.0	54.7	
20 Ethyl ether	59	3.092	3.092	0.000	97	134562	50.0	39.5	
22 1,1-Dichloroethene	96	3.384	3.384	0.000	93	134423	50.0	52.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.438	3.438	0.000	94	140594	50.0	53.8	
24 Acetone	43	3.505	3.505	0.000	97	127732	100.0	86.0	
25 Iodomethane	142	3.633	3.633	0.000	98	175027	50.0	53.0	
26 Carbon disulfide	76	3.676	3.676	0.000	100	288550	50.0	57.7	
28 3-Chloro-1-propene	76	3.937	3.937	0.000	87	75102	50.0	51.6	
30 Methyl acetate	43	4.022	4.022	0.000	100	929846	250.0	215.7	
31 Methylene Chloride	84	4.144	4.144	0.000	95	141055	50.0	44.7	
32 2-Methyl-2-propanol	59	4.430	4.430	0.000	88	96515	500.0	461.2	
33 Acrylonitrile	53	4.552	4.552	0.000	97	692227	500.0	348.4	
34 trans-1,2-Dichloroethene	96	4.564	4.564	0.000	65	134523	50.0	51.5	
35 Methyl tert-butyl ether	73	4.594	4.594	0.000	93	290613	50.0	43.0	
36 Hexane	57	4.984	4.984	0.000	95	258842	50.0	39.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.172	0.000	97	275096	50.0	45.3	
38 Vinyl acetate	43	5.294	5.294	0.000	98	830252	100.0	142.6	
44 2,2-Dichloropropane	77	5.933	5.933	0.000	63	103700	50.0	64.4	
45 cis-1,2-Dichloroethene	96	5.945	5.945	0.000	86	140095	50.0	49.6	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	97	175126	100.0	75.0	
49 Chlorobromomethane	128	6.231	6.231	0.000	85	60521	50.0	51.4	
51 Tetrahydrofuran	42	6.279	6.279	0.000	92	105172	100.0	59.2	
52 Chloroform	83	6.346	6.346	0.000	97	224009	50.0	48.8	
53 1,1,1-Trichloroethane	97	6.529	6.529	0.000	93	162207	50.0	54.4	
54 Cyclohexane	56	6.584	6.584	0.000	96	326734	50.0	39.0	
56 Carbon tetrachloride	117	6.717	6.717	0.000	74	154524	50.0	59.7	
55 1,1-Dichloropropene	75	6.730	6.730	0.000	88	182608	50.0	48.6	
57 Isobutyl alcohol	41	6.943	6.943	0.000	90	108667	1250.0	799.0	
58 Benzene	78	6.955	6.955	0.000	97	552075	50.0	47.2	
59 1,2-Dichloroethane	62	6.979	6.979	0.000	96	208015	50.0	45.8	
62 n-Heptane	43	7.277	7.277	0.000	78	245904	50.0	36.7	
64 Trichloroethene	130	7.666	7.666	0.000	96	127150	50.0	50.7	
66 Methylcyclohexane	83	7.861	7.861	0.000	97	218537	50.0	45.5	
67 1,2-Dichloropropane	63	7.904	7.904	0.000	94	149891	50.0	41.6	
68 Dibromomethane	93	8.019	8.019	0.000	97	70451	50.0	47.4	
70 1,4-Dioxane	88	8.056	8.056	0.000	95	22457	1000.0	833.2	
71 Dichlorobromomethane	83	8.196	8.196	0.000	97	148172	50.0	48.3	
73 2-Chloroethyl vinyl ether	63	8.518	8.518	0.000	88	157318	100.0	104.6	
74 cis-1,3-Dichloropropene	75	8.658	8.658	0.000	88	166335	50.0	47.5	
75 4-Methyl-2-pentanone (MIBK)	43	8.822	8.822	0.000	99	333635	100.0	72.3	
76 Toluene	91	8.993	8.993	0.000	97	565627	50.0	49.9	
77 trans-1,3-Dichloropropene	75	9.218	9.218	0.000	97	135733	50.0	51.7	
78 Ethyl methacrylate	69	9.315	9.315	0.000	92	121295	50.0	38.8	
79 1,1,2-Trichloroethane	97	9.394	9.394	0.000	95	105175	50.0	47.3	
80 Tetrachloroethene	164	9.534	9.534	0.000	95	102351	50.0	48.9	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	95	194642	50.0	45.4	
82 2-Hexanone	43	9.656	9.656	0.000	97	267483	100.0	72.4	
84 Chlorodibromomethane	129	9.796	9.796	0.000	92	89439	50.0	54.7	
85 Ethylene Dibromide	107	9.899	9.899	0.000	95	98220	50.0	47.6	
86 3-Chlorobenzotrifluoride	180	10.374	10.374	0.000	90	180745	50.0	48.5	
87 Chlorobenzene	112	10.392	10.392	0.000	93	363673	50.0	52.7	
88 4-Chlorobenzotrifluoride	180	10.428	10.428	0.000	97	167683	50.0	48.1	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.471	0.000	92	113325	50.0	53.8	
90 Ethylbenzene	106	10.501	10.501	0.000	99	192619	50.0	49.3	
91 m-Xylene & p-Xylene	106	10.617	10.617	0.000	98	242914	50.0	51.1	
92 o-Xylene	106	11.012	11.012	0.000	94	225436	50.0	48.7	
93 Styrene	104	11.025	11.025	0.000	86	378550	50.0	48.6	
94 Bromoform	173	11.213	11.213	0.000	95	52978	50.0	51.2	
96 2-Chlorobenzotrifluoride	180	11.274	11.274	0.000	94	176098	50.0	49.3	
97 Isopropylbenzene	105	11.377	11.377	0.000	97	586517	50.0	50.8	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	138970	50.0	44.4	
100 Bromobenzene	156	11.682	11.682	0.000	97	132283	50.0	49.5	
101 1,2,3-Trichloropropane	110	11.718	11.718	0.000	88	46011	50.0	47.4	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.730	0.000	70	53211	50.0	39.9	
103 N-Propylbenzene	120	11.785	11.785	0.000	99	163912	50.0	52.0	
104 2-Chlorotoluene	126	11.876	11.876	0.000	95	137599	50.0	51.7	
105 3-Chlorotoluene	126	11.937	11.937	0.000	96	159884	50.0	56.4	

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	11.961	11.961	0.000	94	491090	50.0	52.0	
107 4-Chlorotoluene	126	11.980	11.980	0.000	98	149945	50.0	50.7	
108 tert-Butylbenzene	119	12.290	12.290	0.000	94	398092	50.0	51.4	
110 1,2,4-Trimethylbenzene	105	12.332	12.332	0.000	98	504787	50.0	52.0	
111 1,2-dichloro-4-(trifluorom	214	12.405	12.405	0.000	97	130081	50.0	48.7	
112 sec-Butylbenzene	105	12.509	12.509	0.000	96	561225	50.0	50.3	
113 1,3-Dichlorobenzene	146	12.618	12.618	0.000	97	249805	50.0	49.6	
114 4-Isopropyltoluene	119	12.649	12.649	0.000	97	488871	50.0	54.4	
115 1,4-Dichlorobenzene	146	12.710	12.710	0.000	91	252216	50.0	48.5	
116 2,4-Dichloro-1-(trifluorom	214	12.758	12.758	0.000	97	119683	50.0	47.7	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.807	0.000	98	128792	50.0	47.1	
120 n-Butylbenzene	91	13.062	13.062	0.000	99	410962	50.0	50.0	
121 1,2-Dichlorobenzene	146	13.081	13.081	0.000	94	237099	50.0	50.7	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.859	0.000	71	19095	50.0	45.0	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.012	14.012	0.000	98	443265	150.0	150.4	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.425	0.000	99	279536	100.0	99.5	
126 1,2,4-Trichlorobenzene	180	14.693	14.693	0.000	94	87269	50.0	45.0	
127 Hexachlorobutadiene	225	14.863	14.863	0.000	95	46430	50.0	50.5	
128 Naphthalene	128	14.942	14.942	0.000	97	211485	50.0	40.8	
129 1,2,3-Trichlorobenzene	180	15.192	15.192	0.000	96	69205	50.0	45.5	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	96	27222	50.0	42.1	
130 2,3,6-Trichlorotoluene	159	16.062	16.062	0.000	92	26409	50.0	44.6	
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	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	99.8	
S 134 1,2-Dichloroethene, Total	96				0		100.0	101.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	99.2	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWVOA-Pri R_00001	Amount Added: 2.00	Units: uL	
voaWVApri Res_00001	Amount Added: 4.00	Units: uL	
voaEEmix2ndRe_00001	Amount Added: 2.00	Units: uL	
VOAKETONEPRI_00003	Amount Added: 2.00	Units: uL	
voaW2-cle2ndR_00004	Amount Added: 2.00	Units: uL	
VOA8260INT_00027	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added: 2.00	Units: uL	Run Reagent



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130002.D

Injection Date: 30-Jan-2015 09:49:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

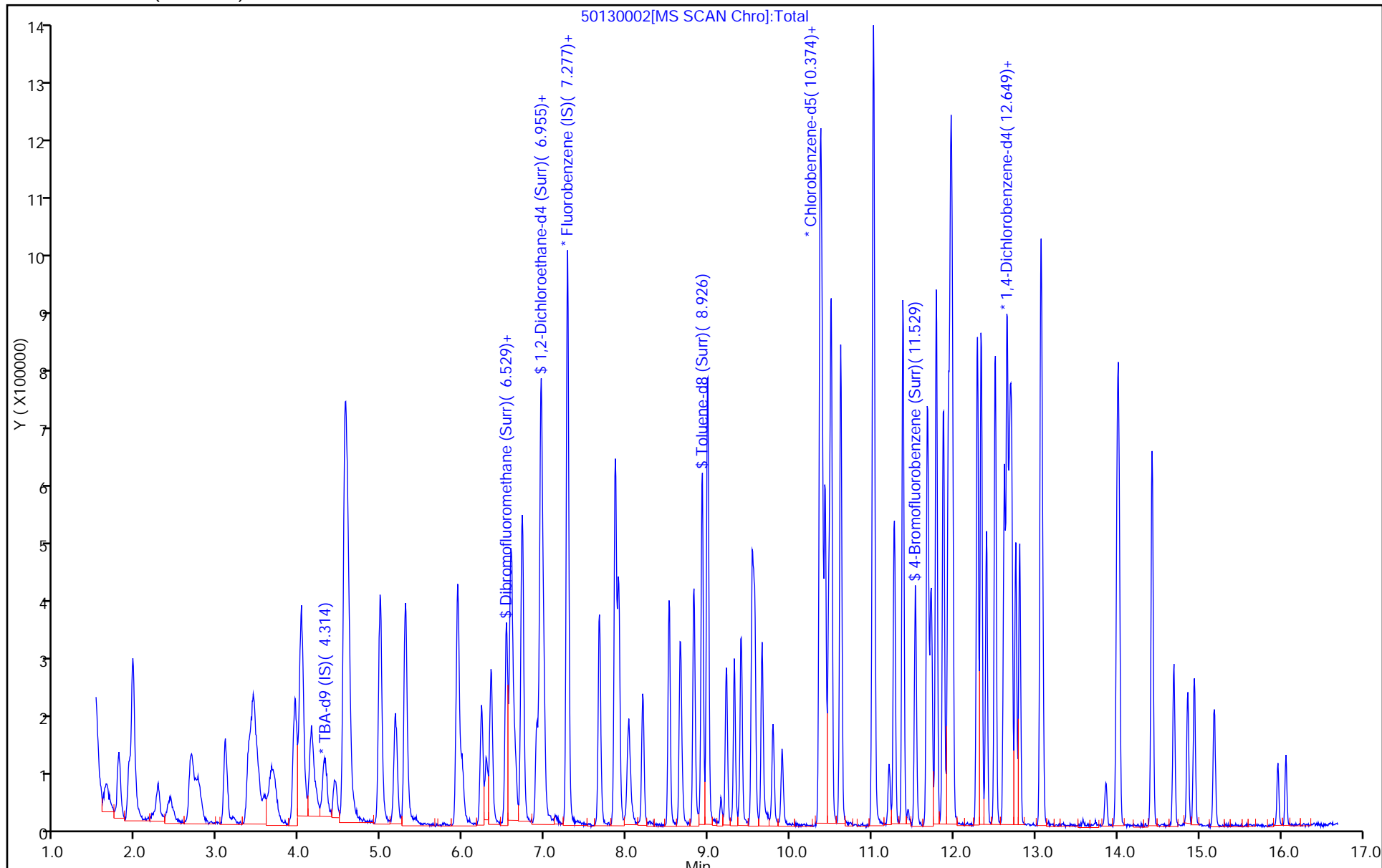
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215001.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 15-Dec-2014 10:05:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0004875-001  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 16-Dec-2014 08:50:57 Calib Date: 15-Dec-2014 16:57:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215013.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK024

First Level Reviewer: fergusond Date: 15-Dec-2014 10:19:43

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	8.359	8.359	0.000	0	90620	NR	NR	
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**QC Flag Legend**

Processing Flags

NR - Missing Quant Standard

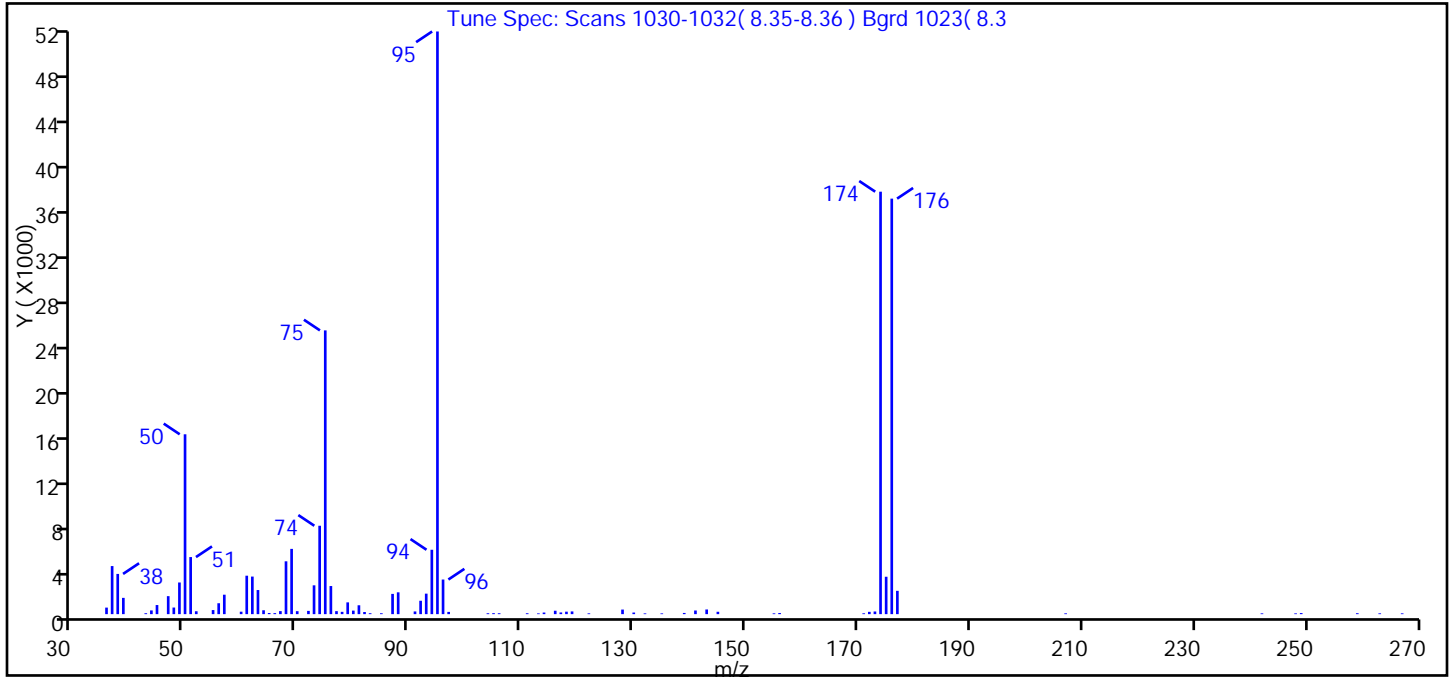
**Reagents:**

VOABFB25\_00056 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215001.D  
 Injection Date: 15-Dec-2014 10:05:30 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	30.9
75	30 to 60% of m/z 95	48.7
96	5 to 9% of m/z 95	5.9
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	72.5
175	5 to 9% of m/z 174	6.4 (8.8)
176	Greater than 95% but less than 101% of m/z 174	71.3 (98.4)
177	5 to 9% of m/z 176	4.0 (5.6)

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215001.D\MSVOA\_LL\_CHHP5.rslt\spectra.d  
Injection Date: 15-Dec-2014 10:05:30  
Spectrum: Tune Spec: Scans 1030-1032( 8.35-8.36 ) Bgrd 1023( 8.3  
Base Peak: 95.00  
Minimum % Base Peak: 0  
Number of Points: 84

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	579	65.00	100	91.00	239	135.00	67
37.00	4259	66.00	91	92.00	1186	139.00	106
38.00	3563	67.00	267	93.00	1816	141.00	322
39.00	1442	68.00	4681	94.00	5704	143.00	413
43.00	82	69.00	5781	95.00	51616	145.00	210
44.00	330	70.00	263	96.00	3066	155.00	71
45.00	806	72.00	288	97.00	199	156.00	100
47.00	1594	73.00	2553	104.00	79	171.00	76
48.00	585	74.00	7830	105.00	86	172.00	204
49.00	2804	75.00	25136	106.00	80	173.00	235
50.00	15933	76.00	2490	111.00	79	174.00	37424
51.00	5056	77.00	265	113.00	67	175.00	3312
52.00	256	78.00	204	114.00	142	176.00	36808
55.00	361	79.00	1043	116.00	302	177.00	2064
56.00	966	80.00	313	117.00	150	207.00	71
57.00	1723	81.00	786	118.00	219	242.00	69
60.00	217	82.00	188	119.00	241	248.00	69
61.00	3405	83.00	81	122.00	71	249.00	95
62.00	3328	85.00	79	128.00	406	259.00	83
63.00	2135	87.00	1794	130.00	142	263.00	72
64.00	343	88.00	1933	132.00	67	267.00	70

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20141215-4875.b\51215001.D

Injection Date: 15-Dec-2014 10:05:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

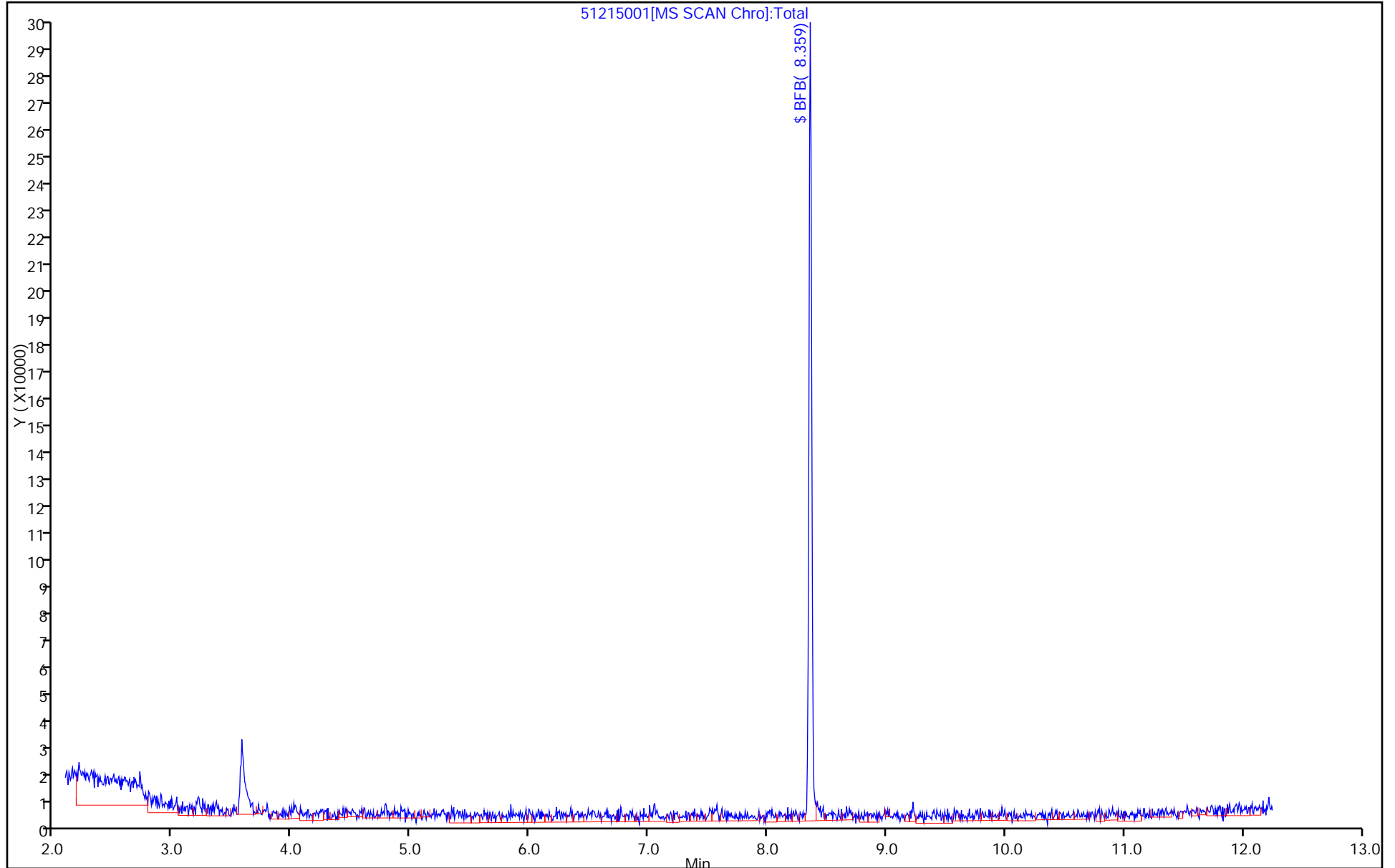
Dil. Factor: 1.0000

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: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 28-Jan-2015 07:58:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0005445-001  
 Operator ID: 034635 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 12:12:05 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
\$ 10 BFB	95	8.330	8.330	0.000	0	1313459	NR	NR	

**QC Flag Legend**

Processing Flags  
 NR - Missing Quant Standard

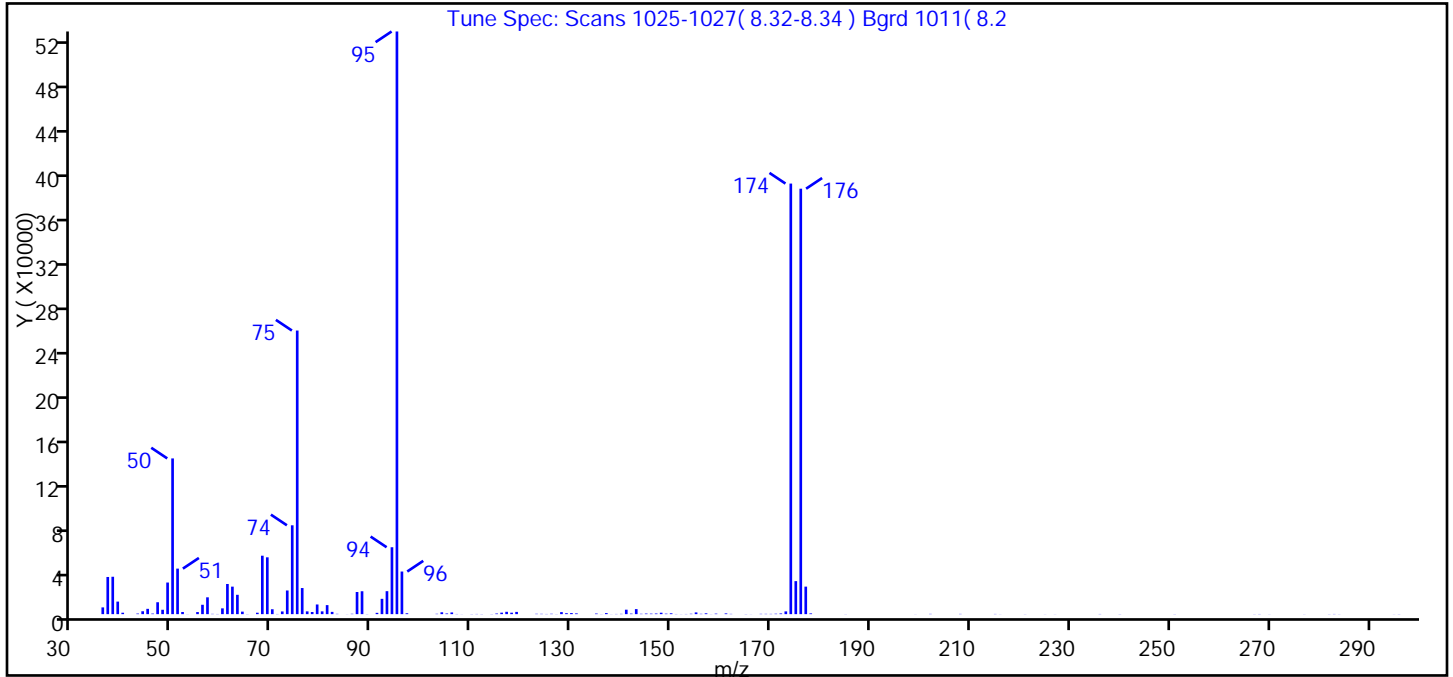
**Reagents:**

VOABFB25\_00058 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D  
 Injection Date: 28-Jan-2015 07:58:30 Instrument ID: CHHP5  
 Lims ID: BFB  
 Client ID:  
 Operator ID: 034635 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Method: MSVOA\_LL\_CHHP5 Limit Group: VOA 8260C ICAL  
 Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	26.7
75	30 to 60% of m/z 95	48.7
96	5 to 9% of m/z 95	7.3
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	73.9
175	5 to 9% of m/z 174	5.7 (7.7)
176	Greater than 95% but less than 101% of m/z 174	73.0 (98.8)
177	5 to 9% of m/z 176	4.7 (6.5)

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D\MSVOA\_LL\_CHHP5.rslt\spectra.d  
Injection Date: 28-Jan-2015 07:58:30  
Spectrum: Tune Spec: Scans 1025-1027( 8.32-8.34 ) Bgrd 1011( 8.2  
Base Peak: 95.00  
Minimum % Base Peak: 0  
Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	6065	76.00	23464	124.00	277	166.00	66
37.00	33408	77.00	2490	125.00	165	168.00	266
38.00	33608	78.00	1914	126.00	337	169.00	255
39.00	11272	79.00	8686	127.00	92	170.00	231
40.00	1280	80.00	2493	128.00	1821	171.00	378
43.00	512	81.00	8115	129.00	859	172.00	628
44.00	2596	82.00	2037	130.00	961	173.00	2482
45.00	4767	83.00	266	131.00	682	174.00	387008
46.00	505	85.00	70	135.00	537	175.00	29672
47.00	10695	86.00	322	136.00	82	176.00	382400
48.00	3934	87.00	19904	137.00	935	177.00	24728
49.00	28416	88.00	20576	138.00	70	178.00	672
50.00	139968	89.00	112	139.00	179	185.00	89
51.00	40920	91.00	1170	140.00	261	199.00	67
52.00	1937	92.00	13759	141.00	4004	202.00	238
53.00	72	93.00	20648	142.00	480	208.00	218
55.00	1874	94.00	60136	143.00	4529	215.00	182
56.00	8422	95.00	523712	144.00	318	216.00	66
57.00	15119	96.00	38304	145.00	524	221.00	92
58.00	251	97.00	782	146.00	460	225.00	67
59.00	155	103.00	307	147.00	574	227.00	71
60.00	5196	104.00	1667	148.00	1281	236.00	162
61.00	27104	105.00	600	149.00	445	240.00	114
62.00	24720	106.00	1524	150.00	770	251.00	110
63.00	17384	107.00	155	151.00	148	267.00	96
64.00	2255	108.00	69	152.00	79	268.00	148
65.00	107	110.00	128	153.00	158	270.00	71
67.00	1286	111.00	177	154.00	348	277.00	75
68.00	52520	112.00	129	155.00	1554	281.00	2
69.00	51072	114.00	121	156.00	300	282.00	102
70.00	4402	115.00	557	157.00	749	283.00	168
71.00	154	116.00	1347	158.00	73	284.00	80
72.00	2426	117.00	2105	159.00	452	295.00	67



Report Date: 28-Jan-2015 12:12:07

Chrom Revision: 2.2 15-Jan-2015 13:05:58

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D\MSVOA\_LL\_CHHP5.rslt\spectra.d

Injection Date: 28-Jan-2015 07:58:30

Spectrum: Tune Spec: Scans 1025-1027( 8.32-8.34 ) Bgrd 1011( 8.2

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	21264	118.00	1315	161.00	670	296.00	106
74.00	79856	119.00	2014	162.00	230		
75.00	254912	123.00	312	165.00	124		

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50127001.D

Injection Date: 28-Jan-2015 07:58:30

Instrument ID: CHHP5

Operator ID: 034635

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

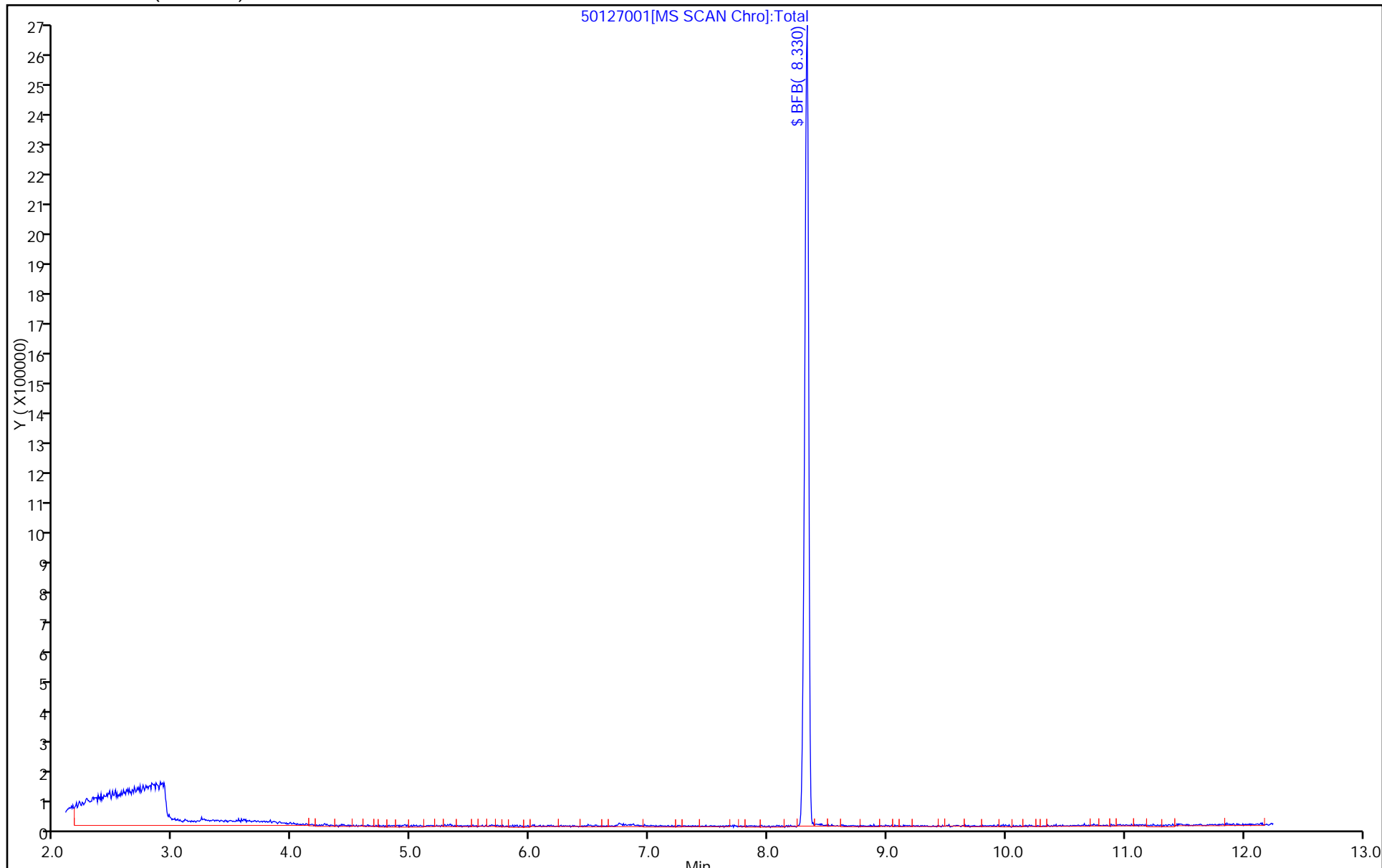
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130001.D  
 Lims ID: BFB  
 Client ID:  
 Sample Type: BFB  
 Inject. Date: 30-Jan-2015 09:11:30 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 5.0 mL Dil. Factor: 1.0000  
 Sample Info: BFB  
 Misc. Info.: 180-0005479-001  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Jan-2015 14:50:56 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: fergusond Date: 30-Jan-2015 09:38:01

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	8.343	8.343	0.000	0	72545	NR	NR	
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**QC Flag Legend**

Processing Flags

NR - Missing Quant Standard

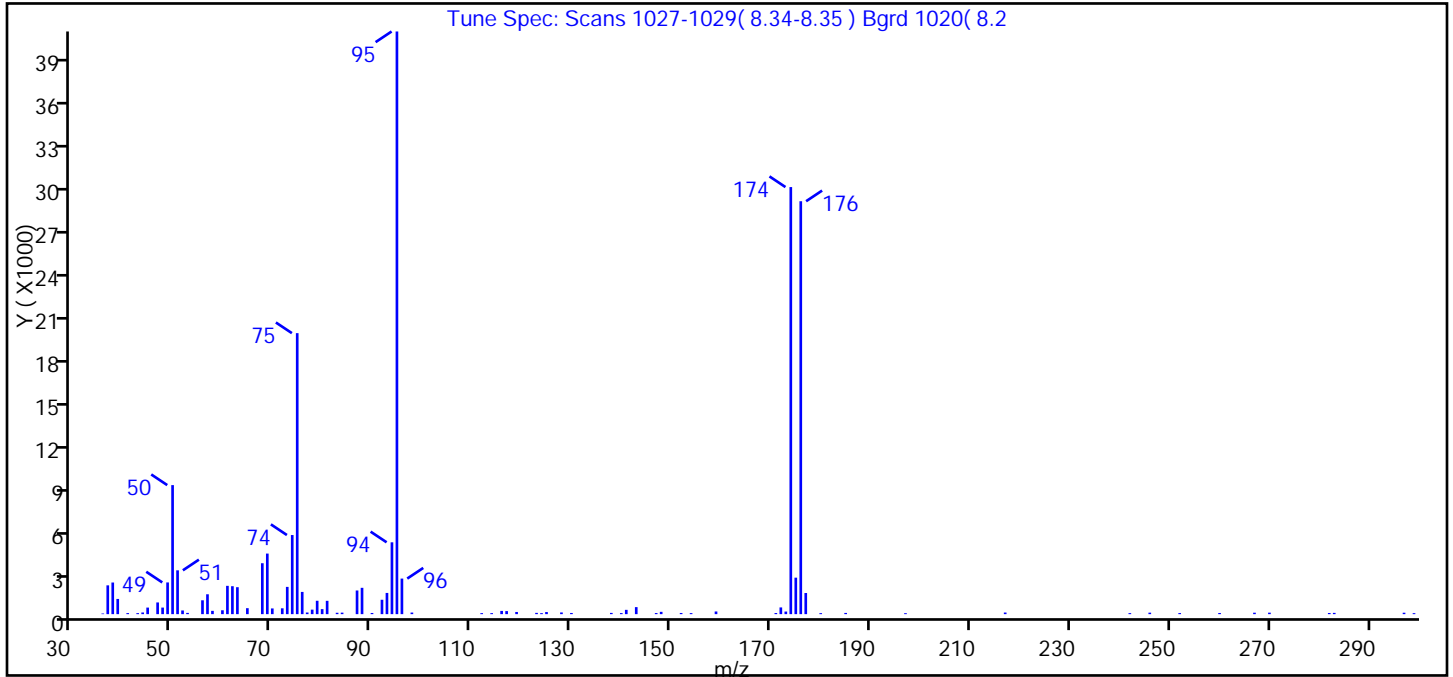
**Reagents:**

VOABFB25\_00058 Amount Added: 1.00 Units: uL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130001.D  
 Injection Date: 30-Jan-2015 09:11:30 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	22.1
75	30 to 60% of m/z 95	48.2
96	5 to 9% of m/z 95	6.1
173	Less than 2% of m/z 174	0.4 (0.6)
174	50 to 120% of m/z 95	73.3
175	5 to 9% of m/z 174	6.3 (8.5)
176	Greater than 95% but less than 101% of m/z 174	70.9 (96.7)
177	5 to 9% of m/z 176	3.6 (5.1)

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130001.D\MSVOA\_LL\_CHHP5.rslt\spectra.d  
Injection Date: 30-Jan-2015 09:11:30  
Spectrum: Tune Spec: Scans 1027-1029( 8.34-8.35 ) Bgrd 1020( 8.2  
Base Peak: 95.00  
Minimum % Base Peak: 0  
Number of Points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	44	65.00	411	95.00	40144	171.00	77
37.00	1984	68.00	3508	96.00	2450	172.00	463
38.00	2179	69.00	4173	98.00	110	173.00	179
39.00	1047	70.00	393	112.00	70	174.00	29424
41.00	73	72.00	402	114.00	70	175.00	2513
43.00	70	73.00	1878	116.00	222	176.00	28448
44.00	114	74.00	5450	117.00	210	177.00	1456
45.00	452	75.00	19360	119.00	150	180.00	69
47.00	806	76.00	1531	123.00	88	185.00	84
48.00	452	77.00	113	124.00	69	197.00	66
49.00	2185	78.00	311	125.00	145	217.00	111
50.00	8890	79.00	921	128.00	117	242.00	71
51.00	3019	80.00	346	130.00	81	246.00	102
52.00	254	81.00	917	138.00	86	252.00	75
53.00	86	83.00	95	140.00	72	260.00	79
56.00	954	84.00	104	141.00	296	267.00	99
57.00	1369	87.00	1630	143.00	484	270.00	102
58.00	227	88.00	1814	147.00	76	282.00	79
60.00	267	90.00	80	148.00	159	283.00	87
61.00	1950	92.00	991	152.00	80	297.00	98
62.00	1924	93.00	1461	154.00	72	299.00	68
63.00	1856	94.00	4949	159.00	184		

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130001.D

Injection Date: 30-Jan-2015 09:11:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

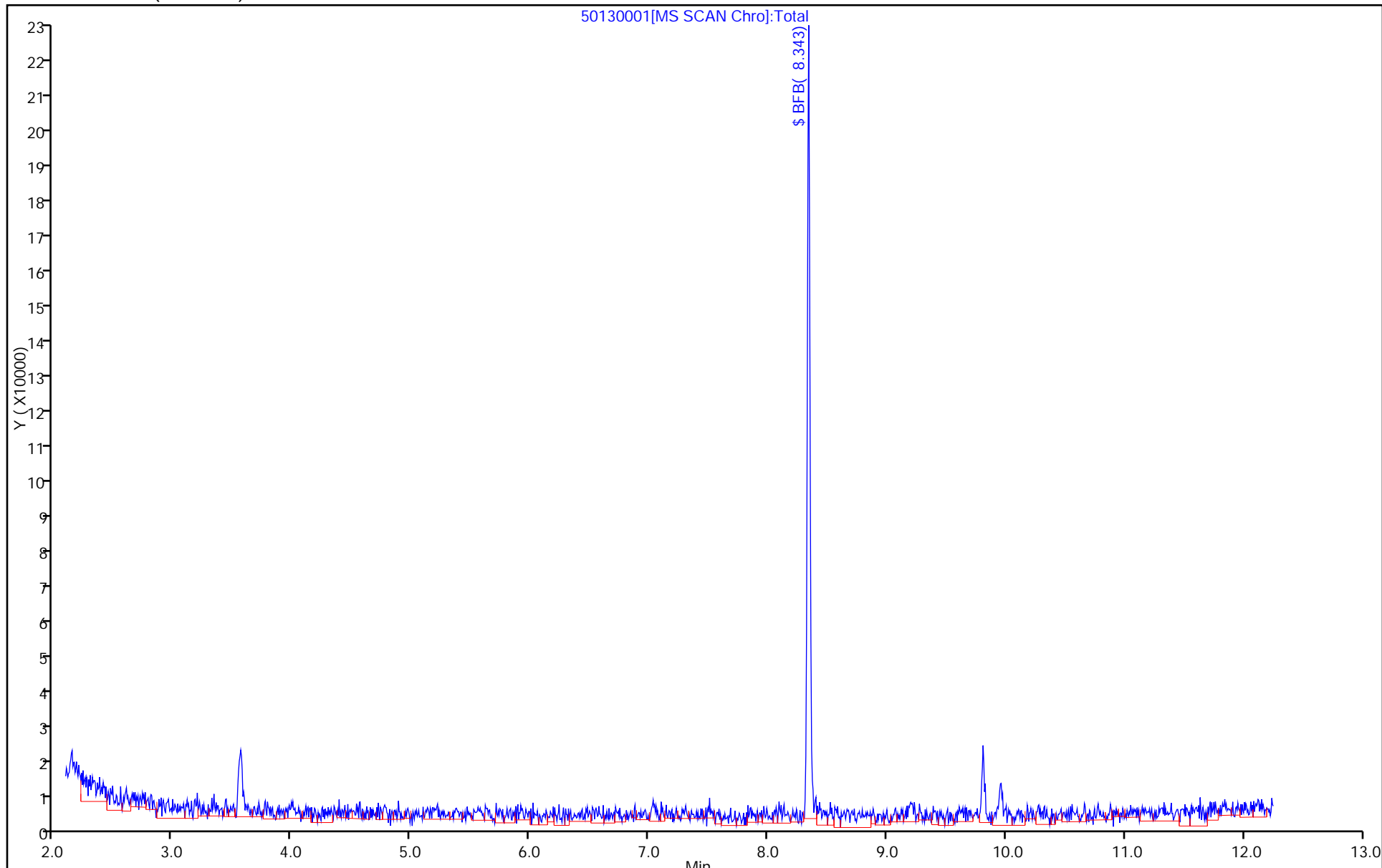
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-131906/5  
 Matrix: Water Lab File ID: 50128005.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 10:35  
 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.: 131906 Units: ug/L

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

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-131906/5  
 Matrix: Water Lab File ID: 50128005.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 10:35  
 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.: 131906 Units: ug/L

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

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	101		70-118
1868-53-7	Dibromofluoromethane (Surr)	106		70-128



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128005.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 28-Jan-2015 10:35:30 ALS Bottle#: 4 Worklist Smp#: 5  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: MB  
 Misc. Info.: 180-0005445-005  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 12:29:09 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 12:29:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.308	-0.012	93	196224	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.276	0.001	99	520134	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.367	-0.005	98	113079	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	98	167894	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.534	-0.005	93	117625	50.0	53.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.899	0.001	94	164395	50.0	45.2	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	95	477779	50.0	50.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.535	-0.005	84	180414	50.0	50.3	
11 Dichlorodifluoromethane	85		1.631					ND	
12 Chloromethane	50		1.783					ND	
13 Vinyl chloride	62		1.911					ND	
14 Butadiene	39		1.959					ND	
15 Bromomethane	94		2.270					ND	
16 Chloroethane	64		2.416					ND	
17 Dichlorofluoromethane	67		2.665					ND	
18 Trichlorofluoromethane	101		2.702					ND	
19 Ethanol	45		3.007					ND	
20 Ethyl ether	59		3.091					ND	
21 Acrolein	56		3.255					ND	
22 1,1-Dichloroethene	96		3.383					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.444					ND	
24 Acetone	43		3.499					ND	
25 Iodomethane	142		3.584					ND	
26 Carbon disulfide	76		3.675					ND	
27 Isopropyl alcohol	45		3.767					ND	
29 Acetonitrile	40		3.925					ND	
28 3-Chloro-1-propene	76		3.955					ND	
30 Methyl acetate	43		4.022					ND	
31 Methylene Chloride	84		4.156					ND	
32 2-Methyl-2-propanol	59		4.435					ND	
33 Acrylonitrile	53		4.557					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		4.563					ND	
35 Methyl tert-butyl ether	73		4.588					ND	
36 Hexane	57		4.983					ND	
37 1,1-Dichloroethane	63		5.178					ND	
38 Vinyl acetate	43		5.290					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
41 Isopropyl ether	45		5.324					ND	
40 Isopropyl ether TIC	45		5.430					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.926					ND	
45 cis-1,2-Dichloroethene	96		5.938					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.987					ND	
47 Propionitrile	54		6.060					ND	
48 Ethyl acetate	43		6.079					ND	
49 Chlorobromomethane	128		6.224					ND	
50 Methacrylonitrile	41		6.237					ND	
51 Tetrahydrofuran	42		6.285					ND	
52 Chloroform	83		6.352					ND	
53 1,1,1-Trichloroethane	97		6.534					ND	
54 Cyclohexane	56		6.589					ND	
56 Carbon tetrachloride	117		6.717					ND	
55 1,1-Dichloropropene	75		6.723					ND	
57 Isobutyl alcohol	41		6.942					ND	
58 Benzene	78		6.954					ND	
59 1,2-Dichloroethane	62		6.990					ND	
61 Tert-amyl methyl ether	73		7.107					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.276					ND	
63 n-Butanol	56		7.648					ND	
64 Trichloroethene	130		7.666					ND	
65 Ethyl acrylate	55		7.819					ND	
66 Methylcyclohexane	83		7.860					ND	
67 1,2-Dichloropropane	63		7.903					ND	
68 Dibromomethane	93		8.031					ND	
70 1,4-Dioxane	88		8.049					ND	
69 Methyl methacrylate	69		8.050					ND	
71 Dichlorobromomethane	83		8.195					ND	
72 2-Nitropropane	41		8.433					ND	
73 2-Chloroethyl vinyl ether	63		8.524					ND	
74 cis-1,3-Dichloropropene	75		8.657					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822					ND	
76 Toluene	91		8.992					ND	
77 trans-1,3-Dichloropropene	75		9.223					ND	
78 Ethyl methacrylate	69		9.320					ND	
79 1,1,2-Trichloroethane	97		9.400					ND	
80 Tetrachloroethene	164		9.539					ND	
81 1,3-Dichloropropane	76		9.564					ND	
82 2-Hexanone	43		9.655					ND	
83 n-Butyl acetate	43		9.784					ND	
84 Chlorodibromomethane	129		9.789					ND	
85 Ethylene Dibromide	107		9.904					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.373					ND	
87 Chlorobenzene	112		10.391					ND	
88 4-Chlorobenzotrifluoride	180		10.434					ND	
89 1,1,1,2-Tetrachloroethane	131		10.476					ND	
90 Ethylbenzene	106		10.501					ND	
91 m-Xylene & p-Xylene	106		10.622					ND	
92 o-Xylene	106		11.012					ND	
93 Styrene	104		11.030					ND	
94 Bromoform	173		11.218					ND	
95 Cyclohexanol	57		11.226					ND	
96 2-Chlorobenzotrifluoride	180		11.273					ND	
97 Isopropylbenzene	105		11.383					ND	
98 Cyclohexanone	55		11.475					ND	
99 1,1,2,2-Tetrachloroethane	83		11.675					ND	
100 Bromobenzene	156		11.687					ND	
101 1,2,3-Trichloropropane	110		11.723					ND	
102 trans-1,4-Dichloro-2-buten	53		11.729					ND	
103 N-Propylbenzene	120		11.790					ND	
104 2-Chlorotoluene	126		11.875					ND	
105 3-Chlorotoluene	126		11.936					ND	
106 1,3,5-Trimethylbenzene	105		11.961					ND	
107 4-Chlorotoluene	126		11.985					ND	
108 tert-Butylbenzene	119		12.289					ND	
109 Pentachloroethane	167		12.308					ND	
110 1,2,4-Trimethylbenzene	105		12.338					ND	
111 1,2-dichloro-4-(trifluorom	214		12.405					ND	
112 sec-Butylbenzene	105		12.508					ND	
113 1,3-Dichlorobenzene	146		12.624					ND	
114 4-Isopropyltoluene	119		12.654					ND	
115 1,4-Dichlorobenzene	146		12.709					ND	
116 2,4-Dichloro-1-(triflourom	214		12.758					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
118 2,5-Dichlorobenzotrifluori	214		12.806					ND	
119 Benzyl chloride	91		12.844					ND	
120 n-Butylbenzene	91		13.062					ND	
121 1,2-Dichlorobenzene	146		13.086					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.865					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.005					ND	
124 1,3,5-Trichlorobenzene	180		14.072					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.431					ND	
126 1,2,4-Trichlorobenzene	180		14.692					ND	
127 Hexachlorobutadiene	225		14.862					ND	
128 Naphthalene	128		14.942					ND	
129 1,2,3-Trichlorobenzene	180		15.185					ND	
131 2,4,5-Trichlorotoluene	159		15.964					ND	
130 2,3,6-Trichlorotoluene	159		16.061					ND	
132 2-Methylnaphthalene	142		16.080					ND	
151 Isooctane	57		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128005.D

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
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 153 1,2 Epoxybutane TIC	42		0.000						ND
T 136 Mesityl oxide TIC	83		0.000						ND
T 137 Tetrahydrofuran TIC	42		0.000						ND
T 138 Methyl n-amyl ketone TIC	43		0.000						ND

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128005.D

Injection Date: 28-Jan-2015 10:35:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: MB

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

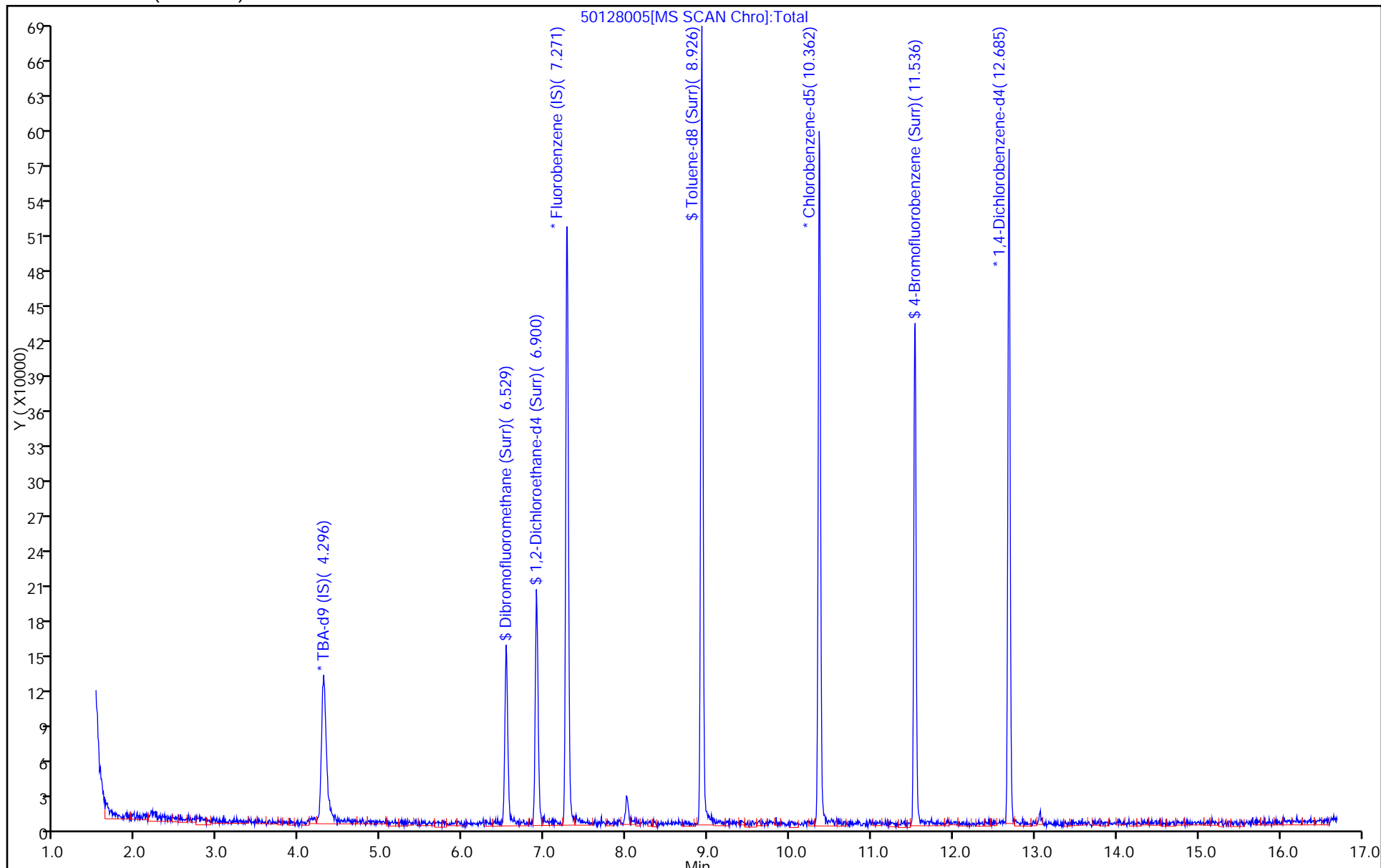
Dil. Factor: 1.0000

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-132193/4  
 Matrix: Water Lab File ID: 50130004.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 10:58  
 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.: 132193 Units: ug/L

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

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-132193/4  
 Matrix: Water Lab File ID: 50130004.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 10:58  
 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.: 132193 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	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)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	90		70-118
1868-53-7	Dibromofluoromethane (Surr)	112		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130004.D  
 Lims ID: MB  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 30-Jan-2015 10:58:30 ALS Bottle#: 4 Worklist Smp#: 4  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: MB  
 Misc. Info.: 180-0005479-004  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Jan-2015 14:52:27 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: fergusond

Date: 30-Jan-2015 14:52:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.308	-0.012	94	179087	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.271	0.006	99	441468	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.368	0.000	98	100911	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.685	0.001	98	146297	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.535	6.523	0.012	91	105093	50.0	55.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.900	0.006	92	149444	50.0	48.4	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.926	0.000	95	404747	50.0	48.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.529	0.001	82	143526	50.0	44.9	
11 Dichlorodifluoromethane	85		1.650					ND	
12 Chloromethane	50		1.790					ND	
13 Vinyl chloride	62		1.911					ND	
14 Butadiene	39		1.960					ND	
15 Bromomethane	94		2.270					ND	
16 Chloroethane	64		2.422					ND	
17 Dichlorofluoromethane	67		2.666					ND	
18 Trichlorofluoromethane	101		2.696					ND	
19 Ethanol	45		3.007					ND	
20 Ethyl ether	59		3.092					ND	
21 Acrolein	56		3.258					ND	
22 1,1-Dichloroethene	96		3.384					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.438					ND	
24 Acetone	43		3.505					ND	
25 Iodomethane	142		3.633					ND	
26 Carbon disulfide	76		3.676					ND	
27 Isopropyl alcohol	45		3.767					ND	
29 Acetonitrile	40		3.925					ND	
28 3-Chloro-1-propene	76		3.937					ND	
30 Methyl acetate	43		4.022					ND	
31 Methylene Chloride	84		4.144					ND	
32 2-Methyl-2-propanol	59		4.430					ND	
33 Acrylonitrile	53		4.552					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		4.594					ND	
36 Hexane	57		4.984					ND	
37 1,1-Dichloroethane	63		5.172					ND	
38 Vinyl acetate	43		5.294					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
41 Isopropyl ether	45		5.324					ND	
40 Isopropyl ether TIC	45		5.430					ND	
42 Tert-butyl ethyl ether	59		5.799					ND	
44 2,2-Dichloropropane	77		5.933					ND	
45 cis-1,2-Dichloroethene	96		5.945					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.987					ND	
47 Propionitrile	54		6.060					ND	
48 Ethyl acetate	43		6.079					ND	
49 Chlorobromomethane	128		6.231					ND	
50 Methacrylonitrile	41		6.237					ND	
51 Tetrahydrofuran	42		6.279					ND	
52 Chloroform	83		6.346					ND	
53 1,1,1-Trichloroethane	97		6.529					ND	
54 Cyclohexane	56		6.584					ND	
56 Carbon tetrachloride	117		6.717					ND	
55 1,1-Dichloropropene	75		6.730					ND	
57 Isobutyl alcohol	41		6.943					ND	
58 Benzene	78		6.955					ND	
59 1,2-Dichloroethane	62		6.979					ND	
61 Tert-amyl methyl ether	73		7.107					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.277					ND	
63 n-Butanol	56		7.648					ND	
64 Trichloroethene	130		7.666					ND	
65 Ethyl acrylate	55		7.819					ND	
66 Methylcyclohexane	83		7.861					ND	
67 1,2-Dichloropropane	63		7.904					ND	
68 Dibromomethane	93		8.019					ND	
69 Methyl methacrylate	69		8.050					ND	
70 1,4-Dioxane	88		8.056					ND	
71 Dichlorobromomethane	83		8.196					ND	
72 2-Nitropropane	41		8.433					ND	
73 2-Chloroethyl vinyl ether	63		8.518					ND	
74 cis-1,3-Dichloropropene	75		8.658					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.822					ND	
76 Toluene	91		8.993					ND	
77 trans-1,3-Dichloropropene	75		9.218					ND	
78 Ethyl methacrylate	69		9.315					ND	
79 1,1,2-Trichloroethane	97		9.394					ND	
80 Tetrachloroethene	164		9.534					ND	
81 1,3-Dichloropropane	76		9.564					ND	
82 2-Hexanone	43		9.656					ND	
83 n-Butyl acetate	43		9.784					ND	
84 Chlorodibromomethane	129		9.796					ND	
85 Ethylene Dibromide	107		9.899					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.374					ND	
87 Chlorobenzene	112		10.392					ND	
88 4-Chlorobenzotrifluoride	180		10.428					ND	
89 1,1,1,2-Tetrachloroethane	131		10.471					ND	
90 Ethylbenzene	106		10.501					ND	
91 m-Xylene & p-Xylene	106		10.617					ND	
92 o-Xylene	106		11.012					ND	
93 Styrene	104		11.025					ND	
94 Bromoform	173		11.213					ND	
95 Cyclohexanol	57		11.226					ND	
96 2-Chlorobenzotrifluoride	180		11.274					ND	
97 Isopropylbenzene	105		11.377					ND	
98 Cyclohexanone	55		11.475					ND	
99 1,1,2,2-Tetrachloroethane	83		11.675					ND	
100 Bromobenzene	156		11.682					ND	
101 1,2,3-Trichloropropane	110		11.718					ND	
102 trans-1,4-Dichloro-2-buten	53		11.730					ND	
103 N-Propylbenzene	120		11.785					ND	
104 2-Chlorotoluene	126		11.876					ND	
105 3-Chlorotoluene	126		11.937					ND	
106 1,3,5-Trimethylbenzene	105		11.961					ND	
107 4-Chlorotoluene	126		11.980					ND	
108 tert-Butylbenzene	119		12.290					ND	
109 Pentachloroethane	167		12.308					ND	
110 1,2,4-Trimethylbenzene	105		12.332					ND	
111 1,2-dichloro-4-(trifluorom	214		12.405					ND	
112 sec-Butylbenzene	105		12.509					ND	
113 1,3-Dichlorobenzene	146		12.618					ND	
114 4-Isopropyltoluene	119		12.649					ND	
115 1,4-Dichlorobenzene	146		12.710					ND	
116 2,4-Dichloro-1-(triflourom	214		12.758					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
118 2,5-Dichlorobenzotrifluori	214		12.807					ND	
119 Benzyl chloride	91		12.844					ND	
120 n-Butylbenzene	91		13.062					ND	
121 1,2-Dichlorobenzene	146		13.081					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.859					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.012					ND	
124 1,3,5-Trichlorobenzene	180		14.072					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.425					ND	
126 1,2,4-Trichlorobenzene	180		14.693					ND	
127 Hexachlorobutadiene	225		14.863					ND	
128 Naphthalene	128		14.942					ND	
129 1,2,3-Trichlorobenzene	180		15.192					ND	
131 2,4,5-Trichlorotoluene	159		15.964					ND	
130 2,3,6-Trichlorotoluene	159		16.062					ND	
132 2-Methylnaphthalene	142		16.080					ND	
151 Isooctane	57		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130004.D

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
146 2,5-Dichlorotoluene	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 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	

**Reagents:**

VOA8260INT\_00027

Amount Added: 2.00

Units: uL

Run Reagent

VOA8260SURR\_00029

Amount Added: 2.00

Units: uL

Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130004.D

Injection Date: 30-Jan-2015 10:58:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

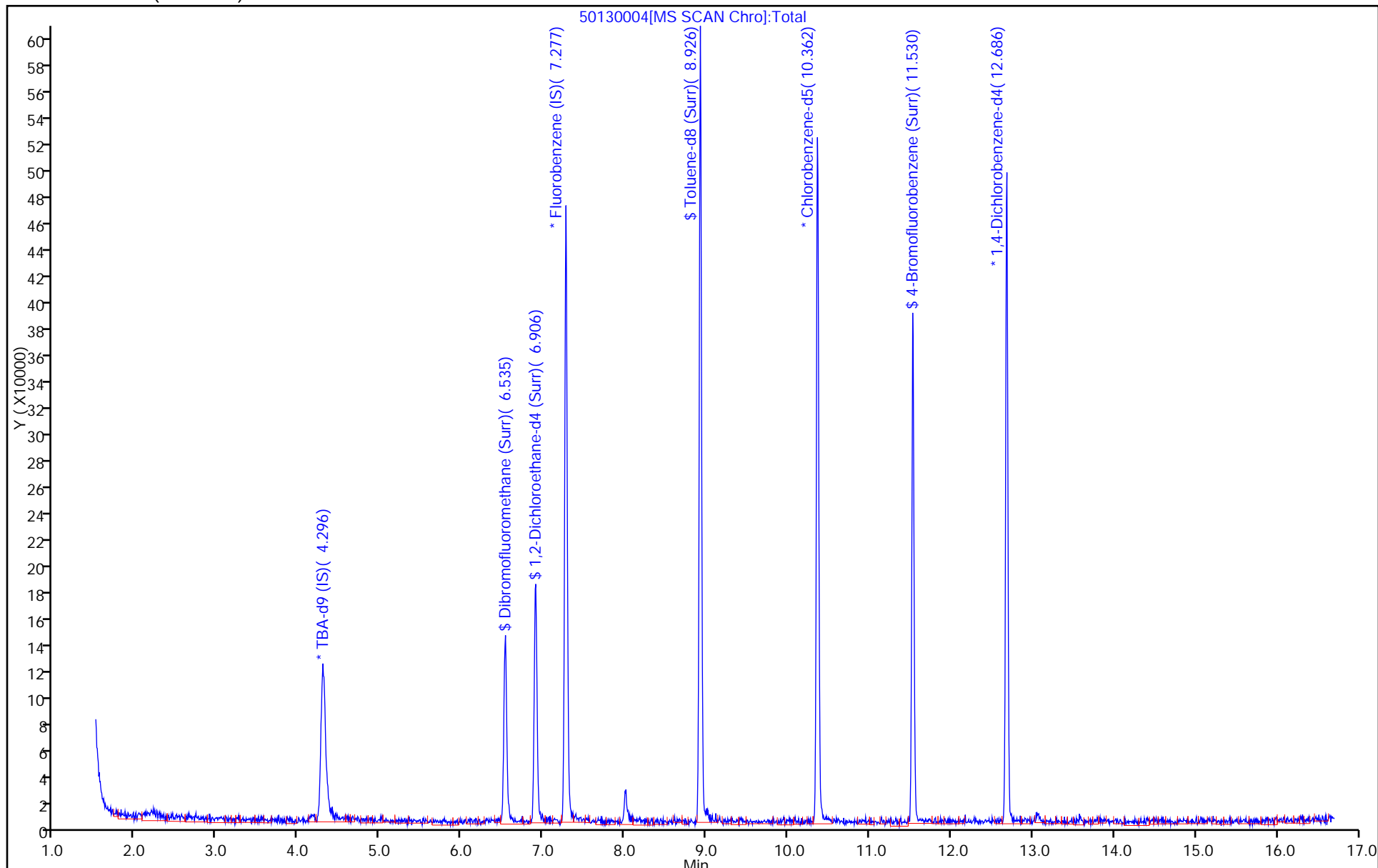
Dil. Factor: 1.0000

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.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-131906/8  
 Matrix: Water Lab File ID: 50128008.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 12:00  
 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.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.25		1.0	0.28
75-01-4	Vinyl chloride	8.63		1.0	0.23
74-83-9	Bromomethane	10.7		1.0	0.31
75-00-3	Chloroethane	8.87		1.0	0.21
75-35-4	1,1-Dichloroethene	9.30		1.0	0.30
67-64-1	Acetone	16.9		5.0	2.5
75-15-0	Carbon disulfide	10.3		1.0	0.21
75-09-2	Methylene Chloride	9.00		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	11.0		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.14		1.0	0.18
75-34-3	1,1-Dichloroethane	9.56		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.96		1.0	0.24
74-97-5	Bromochloromethane	9.94		1.0	0.18
78-93-3	2-Butanone (MEK)	15.7		5.0	0.55
67-66-3	Chloroform	9.92		1.0	0.17
71-55-6	1,1,1-Trichloroethane	11.6		1.0	0.29
56-23-5	Carbon tetrachloride	12.3		1.0	0.14
71-43-2	Benzene	9.83		1.0	0.11
107-06-2	1,2-Dichloroethane	9.32		1.0	0.21
79-01-6	Trichloroethene	10.9		1.0	0.14
78-87-5	1,2-Dichloropropane	8.59		1.0	0.095
75-27-4	Bromodichloromethane	9.52		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.78		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	15.3		5.0	0.53
108-88-3	Toluene	10.2		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	10.3		1.0	0.15
79-00-5	1,1,2-Trichloroethane	8.96		1.0	0.20
127-18-4	Tetrachloroethene	10.2		1.0	0.15
591-78-6	2-Hexanone	12.4		5.0	0.16
124-48-1	Dibromochloromethane	10.1		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.41		1.0	0.18
108-90-7	Chlorobenzene	10.6		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	9.82		1.0	0.23
1330-20-7	Xylenes, Total	19.6		3.0	0.49
100-42-5	Styrene	9.44		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-131906/8  
 Matrix: Water Lab File ID: 50128008.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/28/2015 12:00  
 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.: 131906 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.13		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	8.62		1.0	0.20
107-13-1	Acrylonitrile	72.7		20	0.55
123-91-1	1,4-Dioxane	140	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		64-135
2037-26-5	Toluene-d8 (Surr)	96		71-118
460-00-4	4-Bromofluorobenzene (Surr)	94		70-118
1868-53-7	Dibromofluoromethane (Surr)	102		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128008.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 28-Jan-2015 12:00:30 ALS Bottle#: 7 Worklist Smp#: 8  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: LCS  
 Misc. Info.: 180-0005445-008  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\MMSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 28-Jan-2015 12:42:33 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK028

First Level Reviewer: fergusond

Date: 28-Jan-2015 12:42:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.308	-0.012	92	154775	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.276	0.001	99	470504	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.367	-0.006	97	109410	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.685	0.000	97	158029	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.529	6.534	-0.005	76	101752	50.0	50.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.899	0.007	93	148418	50.0	45.1	
\$ 7 Toluene-d8 (Surr)	98	8.926	8.925	0.001	95	435493	50.0	47.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.535	-0.006	83	162840	50.0	47.0	
11 Dichlorodifluoromethane	85	1.631	1.631	0.000	98	122180	50.0	43.3	
12 Chloromethane	50	1.784	1.783	0.001	99	201773	50.0	36.3	
13 Vinyl chloride	62	1.911	1.911	0.000	98	164894	50.0	43.1	
14 Butadiene	39	1.960	1.959	0.001	98	215260	50.0	39.6	
15 Bromomethane	94	2.264	2.270	-0.006	90	61302	50.0	53.6	
16 Chloroethane	64	2.428	2.416	0.012	98	83883	50.0	44.3	
17 Dichlorofluoromethane	67	2.672	2.665	0.007	97	176246	50.0	46.8	
18 Trichlorofluoromethane	101	2.720	2.702	0.018	95	145107	50.0	60.9	
20 Ethyl ether	59	3.104	3.091	0.013	96	137078	50.0	40.5	
21 Acrolein	56	3.268	3.255	0.013	92	62892	150.0	124.1	
22 1,1-Dichloroethene	96	3.384	3.383	0.001	93	119191	50.0	46.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.444	0.000	95	131935	50.0	50.8	
24 Acetone	43	3.493	3.499	-0.006	96	124907	100.0	84.7	
25 Iodomethane	142	3.590	3.584	0.006	98	180679	50.0	55.0	
26 Carbon disulfide	76	3.676	3.675	0.001	100	255068	50.0	51.3	
28 3-Chloro-1-propene	76	3.961	3.955	0.006	88	65696	50.0	45.4	
30 Methyl acetate	43	4.022	4.022	0.000	100	769095	250.0	179.5	
31 Methylene Chloride	84	4.156	4.156	0.000	92	140993	50.0	45.0	
32 2-Methyl-2-propanol	59	4.424	4.435	-0.011	89	94154	500.0	455.0	
33 Acrylonitrile	53	4.558	4.557	0.001	98	717243	500.0	363.3	
34 trans-1,2-Dichloroethene	96	4.576	4.563	0.013	93	142716	50.0	55.0	
35 Methyl tert-butyl ether	73	4.600	4.588	0.012	94	307178	50.0	45.7	
36 Hexane	57	4.996	4.983	0.013	95	274394	50.0	41.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.178	-0.006	97	288616	50.0	47.8	
38 Vinyl acetate	43	5.306	5.290	0.016	97	216274	50.0	37.4	
44 2,2-Dichloropropane	77	5.926	5.926	0.000	67	108669	50.0	67.9	
45 cis-1,2-Dichloroethene	96	5.939	5.938	0.001	87	139725	50.0	49.8	
46 2-Butanone (MEK)	43	5.987	5.987	0.000	98	182297	100.0	78.6	
49 Chlorobromomethane	128	6.231	6.224	0.007	87	58124	50.0	49.7	
51 Tetrahydrofuran	42	6.291	6.285	0.006	93	117536	100.0	66.6	
52 Chloroform	83	6.346	6.352	-0.006	97	226365	50.0	49.6	
53 1,1,1-Trichloroethane	97	6.541	6.534	0.007	94	171634	50.0	58.0	
54 Cyclohexane	56	6.589	6.589	0.000	97	329175	50.0	39.6	
56 Carbon tetrachloride	117	6.723	6.717	0.006	71	158515	50.0	61.6	
55 1,1-Dichloropropene	75	6.723	6.723	0.000	87	206032	50.0	55.2	
57 Isobutyl alcohol	41	6.948	6.942	0.006	91	113299	1250.0	838.2	
58 Benzene	78	6.961	6.954	0.007	97	572002	50.0	49.2	
59 1,2-Dichloroethane	62	6.991	6.990	0.001	95	210508	50.0	46.6	
62 n-Heptane	43	7.283	7.276	0.007	95	249742	50.0	37.5	
64 Trichloroethene	130	7.666	7.666	0.000	95	136265	50.0	54.7	
66 Methylcyclohexane	83	7.867	7.860	0.007	95	218543	50.0	45.8	
67 1,2-Dichloropropane	63	7.904	7.903	0.001	95	153716	50.0	42.9	
68 Dibromomethane	93	8.031	8.031	0.000	97	70727	50.0	47.9	
70 1,4-Dioxane	88	8.062	8.049	0.013	91	18808	1000.0	702.1	M
71 Dichlorobromomethane	83	8.202	8.195	0.007	96	145031	50.0	47.6	
73 2-Chloroethyl vinyl ether	63	8.518	8.524	-0.006	88	139903	100.0	93.6	
74 cis-1,3-Dichloropropene	75	8.658	8.657	0.001	87	169969	50.0	48.9	
75 4-Methyl-2-pentanone (MIBK)	43	8.822	8.822	0.000	98	361175	100.0	76.4	
76 Toluene	91	8.992	8.992	0.000	97	590483	50.0	50.8	
77 trans-1,3-Dichloropropene	75	9.224	9.223	0.001	95	138658	50.0	51.6	
78 Ethyl methacrylate	69	9.321	9.320	0.001	92	134138	50.0	41.9	
79 1,1,2-Trichloroethane	97	9.406	9.400	0.006	94	102143	50.0	44.8	
80 Tetrachloroethene	164	9.534	9.539	-0.005	95	108922	50.0	50.8	
81 1,3-Dichloropropane	76	9.564	9.564	0.000	95	192537	50.0	43.9	
82 2-Hexanone	43	9.656	9.655	0.001	97	234852	100.0	62.1	
84 Chlorodibromomethane	129	9.789	9.789	0.000	89	84785	50.0	50.6	
85 Ethylene Dibromide	107	9.905	9.904	0.001	99	99484	50.0	47.1	
86 3-Chlorobenzotrifluoride	180	10.373	10.373	0.000	92	190800	50.0	50.0	
87 Chlorobenzene	112	10.392	10.391	0.001	92	372772	50.0	52.8	
88 4-Chlorobenzotrifluoride	180	10.428	10.434	-0.006	95	180812	50.0	50.7	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.476	0.001	92	110686	50.0	51.4	
90 Ethylbenzene	106	10.501	10.501	0.000	99	196370	50.0	49.1	
91 m-Xylene & p-Xylene	106	10.617	10.622	-0.005	98	235613	50.0	48.4	
92 o-Xylene	106	11.012	11.012	0.000	98	236023	50.0	49.8	
93 Styrene	104	11.024	11.030	-0.006	93	376195	50.0	47.2	
94 Bromoform	173	11.213	11.218	-0.005	93	48334	50.0	45.6	
96 2-Chlorobenzotrifluoride	180	11.274	11.273	0.001	92	181844	50.0	49.8	
97 Isopropylbenzene	105	11.377	11.383	-0.006	97	588998	50.0	49.8	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.675	0.000	95	138121	50.0	43.1	
100 Bromobenzene	156	11.681	11.687	-0.006	96	131665	50.0	46.3	
101 1,2,3-Trichloropropane	110	11.718	11.723	-0.005	90	47692	50.0	46.1	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.729	0.001	72	55374	50.0	39.0	
103 N-Propylbenzene	120	11.791	11.790	0.001	99	173397	50.0	51.7	
104 2-Chlorotoluene	126	11.870	11.875	-0.005	95	141240	50.0	49.9	
105 3-Chlorotoluene	126	11.937	11.936	0.001	95	154953	50.0	51.3	



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	11.961	11.961	0.000	95	505607	50.0	50.3	
107 4-Chlorotoluene	126	11.986	11.985	0.001	98	147747	50.0	47.0	
108 tert-Butylbenzene	119	12.290	12.289	0.001	94	414389	50.0	50.2	
110 1,2,4-Trimethylbenzene	105	12.338	12.338	0.000	97	494139	50.0	47.8	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.405	-0.006	96	130801	50.0	45.9	
112 sec-Butylbenzene	105	12.509	12.508	0.001	95	579209	50.0	48.7	
113 1,3-Dichlorobenzene	146	12.618	12.624	-0.006	97	264837	50.0	49.4	
114 4-Isopropyltoluene	119	12.655	12.654	0.001	97	494910	50.0	51.7	
115 1,4-Dichlorobenzene	146	12.709	12.709	0.000	93	265611	50.0	47.9	
116 2,4-Dichloro-1-(trifluorom	214	12.758	12.758	0.000	96	119623	50.0	44.8	
118 2,5-Dichlorobenzotrifluori	214	12.813	12.806	0.007	99	136410	50.0	46.8	
120 n-Butylbenzene	91	13.062	13.062	0.000	98	421005	50.0	48.1	
121 1,2-Dichlorobenzene	146	13.081	13.086	-0.005	95	243551	50.0	48.9	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.865	-0.006	75	19907	50.0	44.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.005	0.000	98	456577	150.0	145.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.431	-0.006	99	277787	100.0	92.8	
126 1,2,4-Trichlorobenzene	180	14.693	14.692	0.001	95	89444	50.0	43.3	
127 Hexachlorobutadiene	225	14.863	14.862	0.001	97	45545	50.0	46.5	
128 Naphthalene	128	14.942	14.942	0.000	97	230485	50.0	41.8	
129 1,2,3-Trichlorobenzene	180	15.185	15.185	0.000	93	67581	50.0	41.7	
131 2,4,5-Trichlorotoluene	159	15.964	15.964	0.000	95	28858	50.0	42.0	
130 2,3,6-Trichlorotoluene	159	16.068	16.061	0.007	95	26554	50.0	42.1	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	104.8	
S 133 Xylenes, Total	106				0		100.0	98.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	100.4	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Review Flags

M - Manually Integrated

## Reagents:

VOA8260VOA2ND_00099	Amount Added: 2.00	Units: uL	
VOAKETONEPRI_00003	Amount Added: 2.00	Units: uL	
voaEEmix2ndRe_00001	Amount Added: 2.00	Units: uL	
voaWVA 2nd Re_00008	Amount Added: 2.00	Units: uL	
VOA2CEVE2ND_00005	Amount Added: 2.00	Units: uL	
VOAACRO2ND_00004	Amount Added: 6.00	Units: uL	
VOA8260INT_00027	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added: 2.00	Units: uL	Run Reagent

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128008.D

Injection Date: 28-Jan-2015 12:00:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: LCS

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

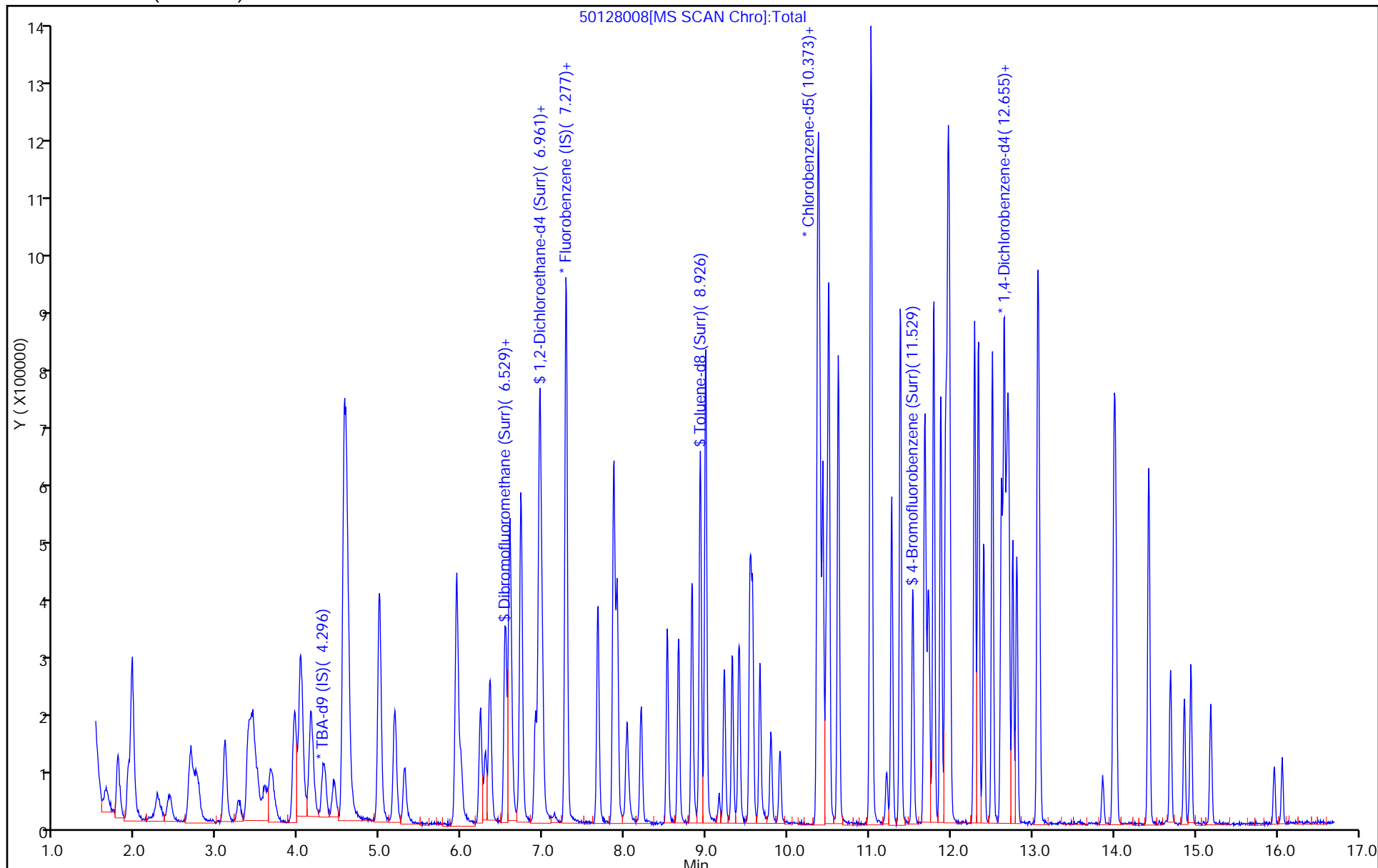
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



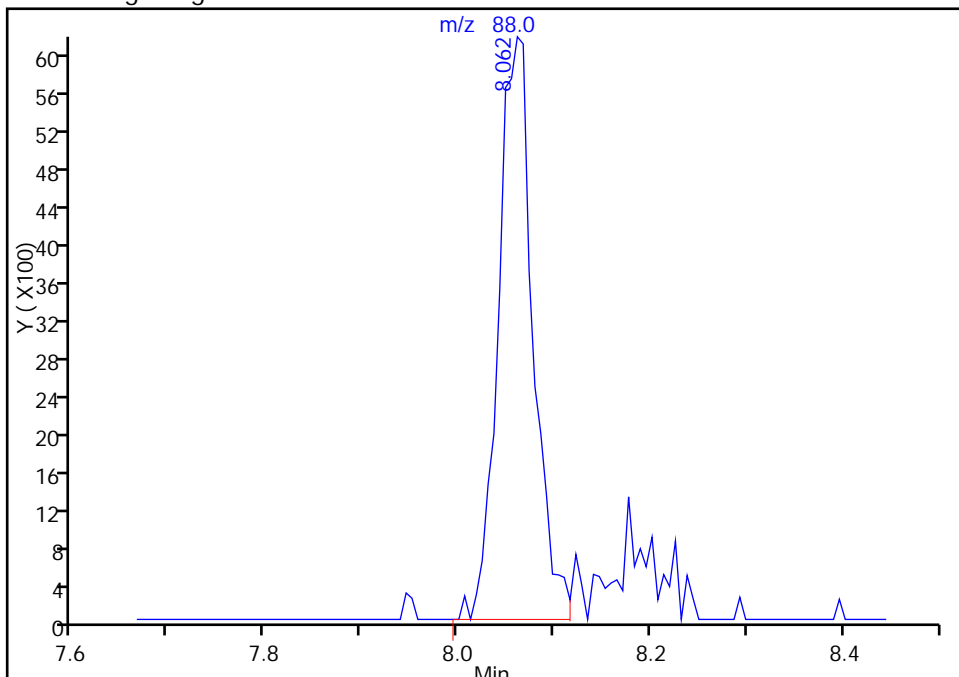
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150128-5445.b\50128008.D  
Injection Date: 28-Jan-2015 12:00:30 Instrument ID: CHHP5  
Lims ID: LCS  
Client ID:  
Operator ID: 001562 ALS Bottle#: 7 Worklist Smp#: 8  
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

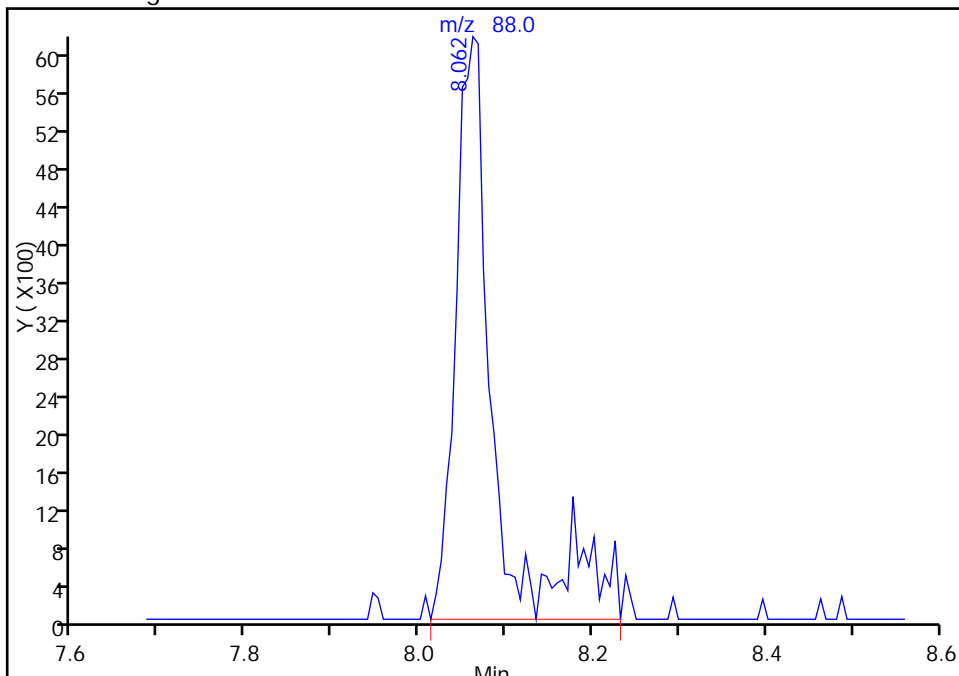
RT: 8.06  
Area: 15512  
Amount: 569.7174  
Amount Units: ng

Processing Integration Results



RT: 8.06  
Area: 18808  
Amount: 702.1445  
Amount Units: ng

Manual Integration Results



Reviewer: fergusond, 28-Jan-2015 12:42:33  
Audit Action: Manually Integrated  
Audit Reason: Peak Tail

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-132193/7  
 Matrix: Water Lab File ID: 50130007.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 12:28  
 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.: 132193 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	7.72		1.0	0.28
75-01-4	Vinyl chloride	8.54		1.0	0.23
74-83-9	Bromomethane	9.06		1.0	0.31
75-00-3	Chloroethane	8.18		1.0	0.21
75-35-4	1,1-Dichloroethene	9.99		1.0	0.30
67-64-1	Acetone	17.5		5.0	2.5
75-15-0	Carbon disulfide	10.4		1.0	0.21
75-09-2	Methylene Chloride	9.10		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.2		1.0	0.17
1634-04-4	Methyl tert-butyl ether	8.58		1.0	0.18
75-34-3	1,1-Dichloroethane	9.29		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.94		1.0	0.24
74-97-5	Bromochloromethane	9.56		1.0	0.18
78-93-3	2-Butanone (MEK)	16.2		5.0	0.55
67-66-3	Chloroform	9.59		1.0	0.17
71-55-6	1,1,1-Trichloroethane	11.1		1.0	0.29
56-23-5	Carbon tetrachloride	11.6		1.0	0.14
71-43-2	Benzene	9.54		1.0	0.11
107-06-2	1,2-Dichloroethane	9.10		1.0	0.21
79-01-6	Trichloroethene	10.2		1.0	0.14
78-87-5	1,2-Dichloropropane	8.18		1.0	0.095
75-27-4	Bromodichloromethane	9.20		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.97		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	14.2		5.0	0.53
108-88-3	Toluene	9.70		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	10.3		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.37		1.0	0.20
127-18-4	Tetrachloroethene	9.98		1.0	0.15
591-78-6	2-Hexanone	11.7		5.0	0.16
124-48-1	Dibromochloromethane	10.6		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	8.66		1.0	0.18
108-90-7	Chlorobenzene	10.1		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.3		1.0	0.28
100-41-4	Ethylbenzene	10.0		1.0	0.23
1330-20-7	Xylenes, Total	19.5		3.0	0.49
100-42-5	Styrene	9.17		1.0	0.097

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-132193/7  
 Matrix: Water Lab File ID: 50130007.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 01/30/2015 12:28  
 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.: 132193 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.59		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	8.53		1.0	0.20
107-13-1	Acrylonitrile	71.4		20	0.55
123-91-1	1,4-Dioxane	136	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	82		64-135
2037-26-5	Toluene-d8 (Surr)	88		71-118
460-00-4	4-Bromofluorobenzene (Surr)	90		70-118
1868-53-7	Dibromofluoromethane (Surr)	93		70-128

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130007.D  
 Lims ID: LCS  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 30-Jan-2015 12:28:30 ALS Bottle#: 7 Worklist Smp#: 7  
 Purge Vol: 5.000 mL Dil. Factor: 1.0000  
 Sample Info: LCS  
 Misc. Info.: 180-0005479-007  
 Operator ID: 001562 Instrument ID: CHHP5  
 Method: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\MSVOA\_LL\_CHHP5.m  
 Limit Group: VOA 8260C ICAL  
 Last Update: 30-Jan-2015 14:54:41 Calib Date: 15-Jan-2015 02:47:30  
 Integrator: RTE ID Type: Deconvolution ID  
 Quant Method: Internal Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHHP5\20150114-5278.b\50114039.D  
 Column 1 : DB-624 ( 0.18 mm) Det: MS SCAN  
 Process Host: XAWRK029

First Level Reviewer: fergusond

Date: 30-Jan-2015 14:54:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.304	4.308	-0.004	88	156868	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.271	0.002	98	469885	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.369	10.368	0.001	98	107510	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.681	12.685	-0.004	97	154548	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.531	6.523	0.008	72	92730	50.0	46.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.900	0.002	93	134633	50.0	41.0	
\$ 7 Toluene-d8 (Surr)	98	8.921	8.926	-0.005	95	393062	50.0	44.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.529	0.002	83	153023	50.0	44.9	
11 Dichlorodifluoromethane	85	1.639	1.650	-0.011	98	151941	50.0	53.9	
12 Chloromethane	50	1.785	1.790	-0.005	99	214425	50.0	38.6	
13 Vinyl chloride	62	1.919	1.911	0.008	98	162894	50.0	42.7	
14 Butadiene	39	1.968	1.960	0.008	98	212398	50.0	39.1	
15 Bromomethane	94	2.266	2.270	-0.004	89	51713	50.0	45.3	
16 Chloroethane	64	2.418	2.422	-0.004	96	77309	50.0	40.9	
17 Dichlorofluoromethane	67	2.674	2.666	0.008	99	165120	50.0	43.9	
18 Trichlorofluoromethane	101	2.722	2.696	0.026	95	137664	50.0	57.8	
20 Ethyl ether	59	3.093	3.092	0.001	96	136041	50.0	40.2	
21 Acrolein	56	3.264	3.258	0.006	97	72444	150.0	143.1	
22 1,1-Dichloroethene	96	3.391	3.384	0.007	93	127807	50.0	49.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.446	3.438	0.008	94	133139	50.0	51.4	
24 Acetone	43	3.495	3.505	-0.010	99	129002	100.0	87.6	
25 Iodomethane	142	3.574	3.633	-0.059	100	175427	50.0	53.5	
26 Carbon disulfide	76	3.665	3.676	-0.011	100	257877	50.0	52.0	
28 3-Chloro-1-propene	76	3.951	3.937	0.014	89	64447	50.0	44.6	
30 Methyl acetate	43	4.018	4.022	-0.004	100	803727	250.0	187.9	
31 Methylene Chloride	84	4.146	4.144	0.002	94	142276	50.0	45.5	
32 2-Methyl-2-propanol	59	4.438	4.430	0.008	86	96796	500.0	461.6	
33 Acrylonitrile	53	4.553	4.552	0.001	98	704036	500.0	357.0	
34 trans-1,2-Dichloroethene	96	4.566	4.564	0.002	55	132112	50.0	51.0	
35 Methyl tert-butyl ether	73	4.608	4.594	0.014	93	287950	50.0	42.9	
36 Hexane	57	4.985	4.984	0.001	95	256253	50.0	39.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.180	5.172	0.008	97	280017	50.0	46.5	
38 Vinyl acetate	43	5.302	5.294	0.008	97	197707	50.0	34.2	
44 2,2-Dichloropropane	77	5.934	5.933	0.001	56	99899	50.0	62.5	
45 cis-1,2-Dichloroethene	96	5.947	5.945	0.001	86	139162	50.0	49.7	
46 2-Butanone (MEK)	43	5.989	5.987	0.002	97	187257	100.0	80.8	
49 Chlorobromomethane	128	6.226	6.231	-0.005	86	55834	50.0	47.8	
51 Tetrahydrofuran	42	6.287	6.279	0.008	94	110268	100.0	62.6	
52 Chloroform	83	6.348	6.346	0.002	97	218432	50.0	47.9	
53 1,1,1-Trichloroethane	97	6.531	6.529	0.002	95	164644	50.0	55.7	
54 Cyclohexane	56	6.591	6.584	0.007	97	325458	50.0	39.2	
56 Carbon tetrachloride	117	6.719	6.717	0.002	94	148799	50.0	57.9	
55 1,1-Dichloropropene	75	6.725	6.730	-0.005	87	193428	50.0	51.8	
57 Isobutyl alcohol	41	6.938	6.943	-0.004	93	112445	1250.0	833.0	
58 Benzene	78	6.956	6.955	0.001	97	554259	50.0	47.7	
59 1,2-Dichloroethane	62	6.987	6.979	0.008	95	205201	50.0	45.5	
62 n-Heptane	43	7.279	7.277	0.002	95	243494	50.0	36.6	
64 Trichloroethene	130	7.668	7.666	0.002	94	126256	50.0	50.8	
66 Methylcyclohexane	83	7.863	7.861	0.002	97	214459	50.0	45.0	
67 1,2-Dichloropropane	63	7.905	7.904	0.001	93	146317	50.0	40.9	
68 Dibromomethane	93	8.027	8.019	0.008	96	72343	50.0	49.1	
70 1,4-Dioxane	88	8.057	8.056	0.001	84	18218	1000.0	681.0	
71 Dichlorobromomethane	83	8.203	8.196	0.007	96	140026	50.0	46.0	
73 2-Chloroethyl vinyl ether	63	8.520	8.518	0.002	86	150440	100.0	100.8	
74 cis-1,3-Dichloropropene	75	8.654	8.658	-0.004	88	173056	50.0	49.8	
75 4-Methyl-2-pentanone (MIBK)	43	8.824	8.822	0.002	98	328671	100.0	70.8	
76 Toluene	91	8.988	8.993	-0.005	98	553826	50.0	48.5	
77 trans-1,3-Dichloropropene	75	9.213	9.218	-0.005	96	136576	50.0	51.7	
78 Ethyl methacrylate	69	9.317	9.315	0.002	94	133084	50.0	42.3	
79 1,1,2-Trichloroethane	97	9.396	9.394	0.002	92	104886	50.0	46.8	
80 Tetrachloroethene	164	9.536	9.534	0.002	89	105040	50.0	49.9	
81 1,3-Dichloropropane	76	9.566	9.564	0.002	96	187721	50.0	43.5	
82 2-Hexanone	43	9.651	9.656	-0.005	97	217592	100.0	58.5	
84 Chlorodibromomethane	129	9.791	9.796	-0.005	90	87263	50.0	53.0	
85 Ethylene Dibromide	107	9.901	9.899	0.002	98	89923	50.0	43.3	
86 3-Chlorobenzotrifluoride	180	10.369	10.374	-0.005	93	181807	50.0	48.5	
87 Chlorobenzene	112	10.387	10.392	-0.005	92	350138	50.0	50.4	
88 4-Chlorobenzotrifluoride	180	10.430	10.428	0.002	94	159113	50.0	45.4	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.471	0.002	93	109262	50.0	51.6	
90 Ethylbenzene	106	10.503	10.501	0.002	98	196867	50.0	50.1	
91 m-Xylene & p-Xylene	106	10.613	10.617	-0.004	98	235483	50.0	49.2	
92 o-Xylene	106	11.014	11.012	0.002	99	224603	50.0	48.3	
93 Styrene	104	11.026	11.025	0.001	93	359059	50.0	45.8	
94 Bromoform	173	11.209	11.213	-0.004	93	49887	50.0	47.9	
96 2-Chlorobenzotrifluoride	180	11.276	11.274	0.002	96	175625	50.0	48.9	
97 Isopropylbenzene	105	11.379	11.377	0.002	97	573341	50.0	49.4	
99 1,1,2,2-Tetrachloroethane	83	11.671	11.675	-0.004	96	134327	50.0	42.7	
100 Bromobenzene	156	11.683	11.682	0.001	97	123133	50.0	44.3	
101 1,2,3-Trichloropropane	110	11.714	11.718	-0.004	89	44844	50.0	44.4	
102 trans-1,4-Dichloro-2-buten	53	11.738	11.730	0.008	74	52146	50.0	37.6	
103 N-Propylbenzene	120	11.787	11.785	0.002	99	168475	50.0	51.3	
104 2-Chlorotoluene	126	11.872	11.876	-0.004	95	136649	50.0	49.3	
105 3-Chlorotoluene	126	11.939	11.937	0.002	95	139353	50.0	47.2	

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	11.963	11.961	0.002	94	480600	50.0	48.9	
107 4-Chlorotoluene	126	11.981	11.980	0.001	98	154507	50.0	50.2	
108 tert-Butylbenzene	119	12.285	12.290	-0.005	94	395064	50.0	49.0	
110 1,2,4-Trimethylbenzene	105	12.334	12.332	0.002	96	479144	50.0	47.4	
111 1,2-dichloro-4-(trifluorom	214	12.401	12.405	-0.004	97	120764	50.0	43.4	
112 sec-Butylbenzene	105	12.504	12.509	-0.005	95	573084	50.0	49.3	
113 1,3-Dichlorobenzene	146	12.614	12.618	-0.004	96	249441	50.0	47.5	
114 4-Isopropyltoluene	119	12.650	12.649	0.001	98	482979	50.0	51.6	
115 1,4-Dichlorobenzene	146	12.705	12.710	-0.005	93	257428	50.0	47.5	
116 2,4-Dichloro-1-(trifluorom	214	12.760	12.758	0.002	96	117595	50.0	45.0	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.807	0.002	98	119595	50.0	42.0	
120 n-Butylbenzene	91	13.058	13.062	-0.004	99	398923	50.0	46.6	
121 1,2-Dichlorobenzene	146	13.082	13.081	0.001	94	224655	50.0	46.1	
122 1,2-Dibromo-3-Chloropropan	75	13.861	13.859	0.002	74	20289	50.0	45.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.007	14.012	-0.005	99	414065	150.0	134.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.425	0.002	98	260204	100.0	88.9	
126 1,2,4-Trichlorobenzene	180	14.688	14.693	-0.005	92	82744	50.0	41.0	
127 Hexachlorobutadiene	225	14.859	14.863	-0.004	96	42388	50.0	44.2	
128 Naphthalene	128	14.938	14.942	-0.004	98	208879	50.0	38.7	
129 1,2,3-Trichlorobenzene	180	15.181	15.192	-0.011	93	65183	50.0	41.1	
131 2,4,5-Trichlorotoluene	159	15.960	15.964	-0.004	94	23008	50.0	34.2	
130 2,3,6-Trichlorotoluene	159	16.057	16.062	-0.005	95	25536	50.0	41.4	
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	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	97.5	
S 134 1,2-Dichloroethene, Total	96				0		100.0	100.7	
S 135 1,3-Dichloropropene, Total	1				0		100.0	101.5	

## QC Flag Legend

### Processing Flags

ND - Not Detected or Marked ND

### Reagents:

voaWVOA 2nd R_00001	Amount Added: 2.00	Units: uL	
voaW2-cle2ndR_00004	Amount Added: 2.00	Units: uL	
voaWVA 2nd Re_00008	Amount Added: 2.00	Units: uL	
voaEEmix2ndRe_00001	Amount Added: 2.00	Units: uL	
VOAKETONEPRI_00003	Amount Added: 2.00	Units: uL	
VOAACRO2ND_00004	Amount Added: 6.00	Units: uL	
VOA8260INT_00027	Amount Added: 2.00	Units: uL	Run Reagent
VOA8260SURR_00029	Amount Added: 2.00	Units: uL	Run Reagent



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150130-5479.b\50130007.D

Injection Date: 30-Jan-2015 12:28:30

Instrument ID: CHHP5

Operator ID: 001562

Lims ID: LCS

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

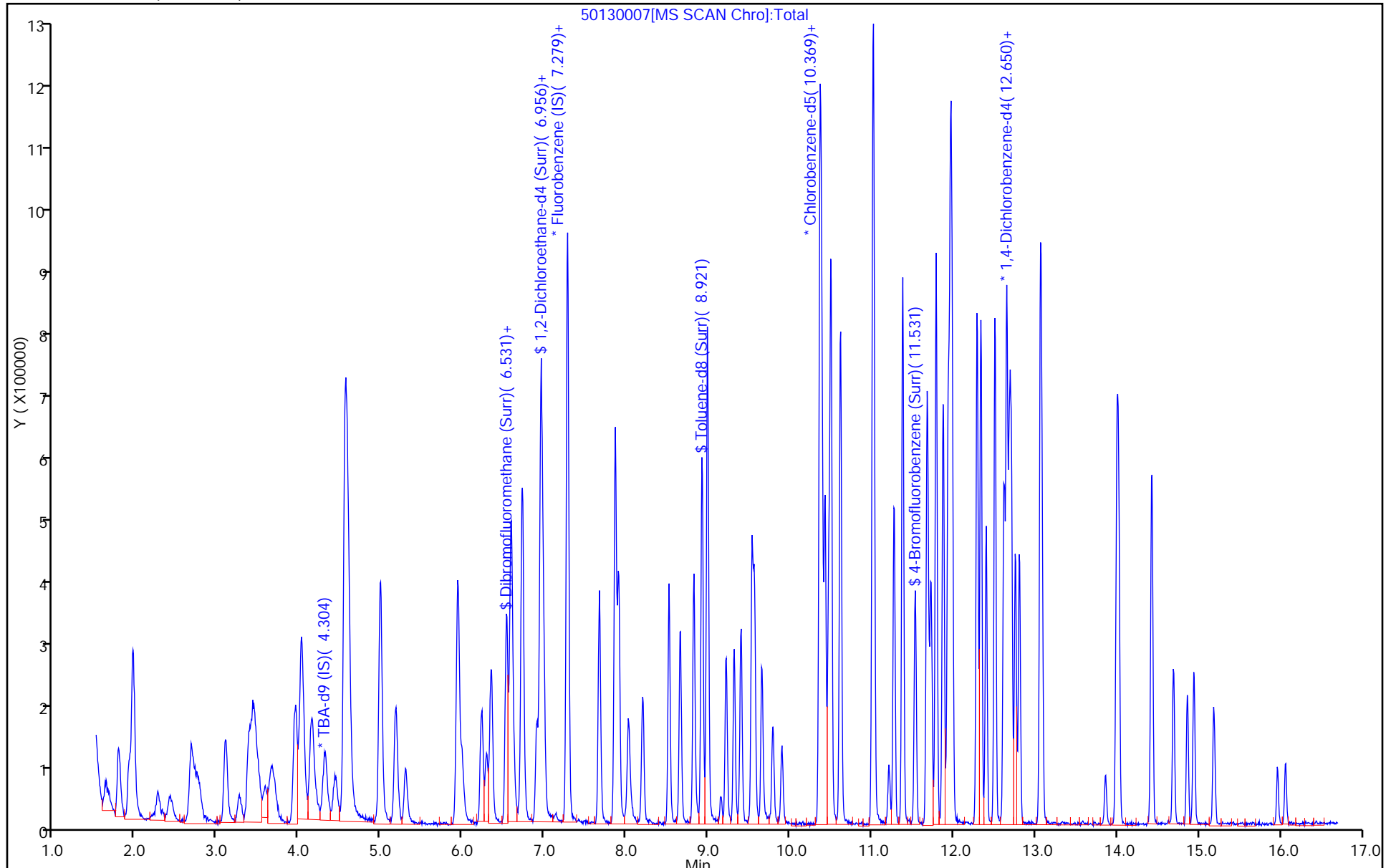
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA\_LL\_CHHP5

Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm)



GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHHP5 Start Date: 12/15/2014 10:05

Analysis Batch Number: 128329 End Date: 12/16/2014 10:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-128329/1		12/15/2014 10:05	1	51215001.D	DB-624 0.18 (mm)
IC 180-128329/7		12/15/2014 14:33	1	51215007.D	DB-624 0.18 (mm)
IC 180-128329/8		12/15/2014 14:57	1	51215008.D	DB-624 0.18 (mm)
ICIS 180-128329/9		12/15/2014 15:21	1	51215009.D	DB-624 0.18 (mm)
IC 180-128329/10		12/15/2014 15:45	1	51215010.D	DB-624 0.18 (mm)
IC 180-128329/11		12/15/2014 16:09	1	51215011.D	DB-624 0.18 (mm)
IC 180-128329/12		12/15/2014 16:33	1	51215012.D	DB-624 0.18 (mm)
IC 180-128329/13		12/15/2014 16:57	1	51215013.D	DB-624 0.18 (mm)
ICV 180-128329/17		12/16/2014 10:31	1		DB-624 0.18 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHHP5 Start Date: 01/28/2015 07:58Analysis Batch Number: 131906 End Date: 01/28/2015 19:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-131906/1		01/28/2015 07:58	1	50127001.D	DB-624 0.18 (mm)
CCV 180-131906/2		01/28/2015 08:28	1		DB-624 0.18 (mm)
ZZZZZ		01/28/2015 08:28	1		DB-624 0.18 (mm)
CCVIS 180-131906/3		01/28/2015 09:13	1	50128003.D	DB-624 0.18 (mm)
ZZZZZ		01/28/2015 09:13	1		DB-624 0.18 (mm)
MB 180-131906/5		01/28/2015 10:35	1	50128005.D	DB-624 0.18 (mm)
LCS 180-131906/8		01/28/2015 12:00	1	50128008.D	DB-624 0.18 (mm)
180-40617-1	HD-CW-9-0/1-0	01/28/2015 14:00	12.5	50128013.D	DB-624 0.18 (mm)
180-40617-2	HD-CW-13-0/1-0	01/28/2015 14:24	25	50128014.D	DB-624 0.18 (mm)
180-40617-6	HD-QC6-0/1-2	01/28/2015 14:49	1	50128015.D	DB-624 0.18 (mm)
180-40617-3	HD-CW-15A-0/1-0	01/28/2015 15:13	500	50128016.D	DB-624 0.18 (mm)
180-40617-4	HD-CW-17-0/1-0	01/28/2015 15:37	5	50128017.D	DB-624 0.18 (mm)
180-40617-5	HD-CW-20-0/1-0	01/28/2015 16:25	50	50128019.D	DB-624 0.18 (mm)
ZZZZZ		01/28/2015 19:38	2.5		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHHP5 Start Date: 01/30/2015 09:11

Analysis Batch Number: 132193 End Date: 01/30/2015 20:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-132193/1		01/30/2015 09:11	1	50130001.D	DB-624 0.18 (mm)
CCVIS 180-132193/2		01/30/2015 09:49	1	50130002.D	DB-624 0.18 (mm)
MB 180-132193/4		01/30/2015 10:58	1	50130004.D	DB-624 0.18 (mm)
LCS 180-132193/7		01/30/2015 12:28	1	50130007.D	DB-624 0.18 (mm)
180-40617-2 DL	HD-CW-13-0/1-0 DL	01/30/2015 15:45	50	50130015.D	DB-624 0.18 (mm)
180-40617-4 DL	HD-CW-17-0/1-0 DL	01/30/2015 16:10	20	50130016.D	DB-624 0.18 (mm)
ZZZZZ		01/30/2015 17:22	20		DB-624 0.18 (mm)
ZZZZZ		01/30/2015 19:47	1		DB-624 0.18 (mm)
ZZZZZ		01/30/2015 20:11	1		DB-624 0.18 (mm)
ZZZZZ		01/30/2015 20:35	1		DB-624 0.18 (mm)
ZZZZZ		01/30/2015 20:59	1		DB-624 0.18 (mm)

# 300\_ORGFMS

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Anions, Ion Chromatography

FORM III  
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: A-ICS2100 A 01-21-2015-5.d  
 Lab ID: LCS 180-131352/5 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.64	105	90-110	
Chloride	50.0	52.8	106	90-110	
Sulfate	50.0	53.0	106	90-110	

# Column to be used to flag recovery and RPD values

FORM IV  
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: A-ICS2100 A 01-21-2015-6.d Lab Sample ID: MB 180-131352/6  
 Matrix: Water Date Extracted: \_\_\_\_\_  
 Instrument ID: CHIC2100A Date Analyzed: 01/21/2015 12:01  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-131352/4	A-ICS2100 A 01-21-2015- 4.d	01/21/2015 11:30
	LCS 180-131352/5	A-ICS2100 A 01-21-2015- 5.d	01/21/2015 11:46
HD-CW-9-0/1-0	180-40617-1	A-ICS2100 A 01-21-2015- 10.d	01/21/2015 15:17
HD-CW-9-0/1-0	180-40617-1	A-ICS2100 A 01-21-2015- 11.d	01/21/2015 15:33
HD-CW-13-0/1-0	180-40617-2	A-ICS2100 A 01-21-2015- 12.d	01/21/2015 15:48
HD-CW-13-0/1-0	180-40617-2	A-ICS2100 A 01-21-2015- 13.d	01/21/2015 16:03
HD-CW-15A-0/1-0	180-40617-3	A-ICS2100 A 01-21-2015- 14.d	01/21/2015 16:19
	CCB 180-131352/16	A-ICS2100 A 01-21-2015- 16.d	01/21/2015 16:49
HD-CW-17-0/1-0	180-40617-4	A-ICS2100 A 01-21-2015- 17.d	01/21/2015 17:05
HD-CW-20-0/1-0	180-40617-5	A-ICS2100 A 01-21-2015- 19.d	01/21/2015 17:35
	CCB 180-131352/28	A-ICS2100 A 01-21-2015- 28.d	01/21/2015 19:53

FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-9-0/1-0 Lab Sample ID: 180-40617-1  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-10.d  
 Analysis Method: 300.0 Date Collected: 01/20/2015 07:25  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 15:17  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	6.6	B	0.10	0.0062
14808-79-8	Sulfate	37		1.0	0.21



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-10.d  
 Lims ID: 180-40617-A-1 Lab Sample ID: 180-40617-1  
 Client ID: HD-CW-9-0/1-0  
 Sample Type: Client  
 Inject. Date: 21-Jan-2015 15:17:00 ALS Bottle#: 0 Worklist Smp#: 10  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-010  
 Misc. Info.: 19 180-40617-a-1  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

First Level Reviewer: reaglec Date: 22-Jan-2015 09:53:58

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.008	-0.016	5091809073	239.2	E
3 Sulfate	5.500	5.500	0.000	577603151	37.4	
5 Nitrate as N	7.233	7.300	-0.067	348652830	6.59	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-10.d

Injection Date: 21-Jan-2015 15:17:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-40617-A-1

Lab Sample ID: 180-40617-1

Worklist Smp#: 10

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

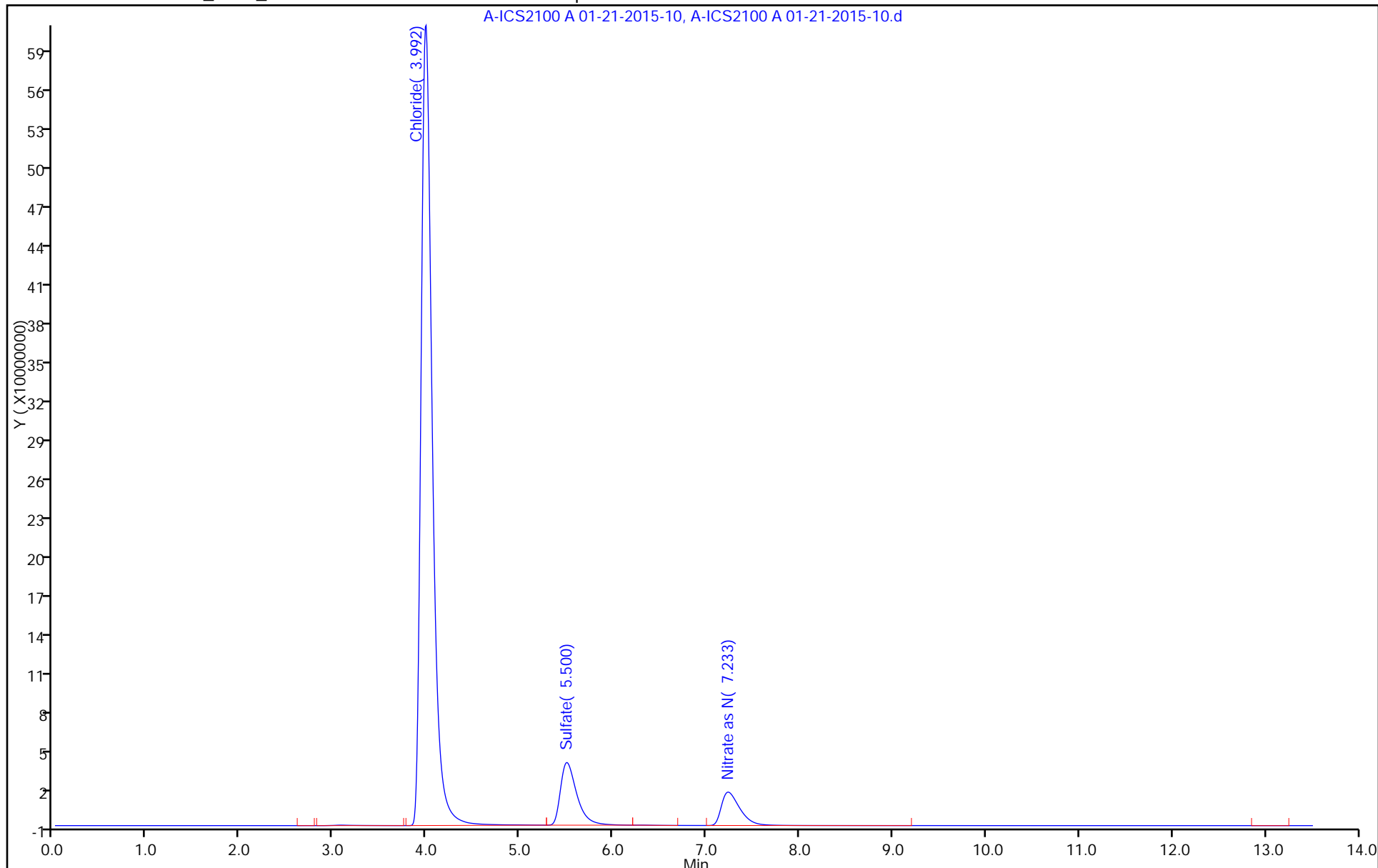
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-9-0/1-0 Lab Sample ID: 180-40617-1  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-11.d  
 Analysis Method: 300.0 Date Collected: 01/20/2015 07:25  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 15:33  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 5  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	240		5.0	0.98

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-11.d  
 Lims ID: 180-40617-A-1 Lab Sample ID: 180-40617-1  
 Client ID: HD-CW-9-0/1-0  
 Sample Type: Client  
 Inject. Date: 21-Jan-2015 15:33:00 ALS Bottle#: 0 Worklist Smp#: 11  
 Injection Vol: 10.0 ul Dil. Factor: 5.0000  
 Sample Info: 180-0005367-011  
 Misc. Info.: 20 180-40617-a-1,,,5  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.008	4.008	0.000	1037869902	48.7	
3 Sulfate	5.567	5.500	0.067	123559183	7.86	
5 Nitrate as N	7.333	7.300	0.033	68342893	1.30	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-11.d

Injection Date: 21-Jan-2015 15:33:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-40617-A-1

Lab Sample ID: 180-40617-1

Worklist Smp#: 11

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

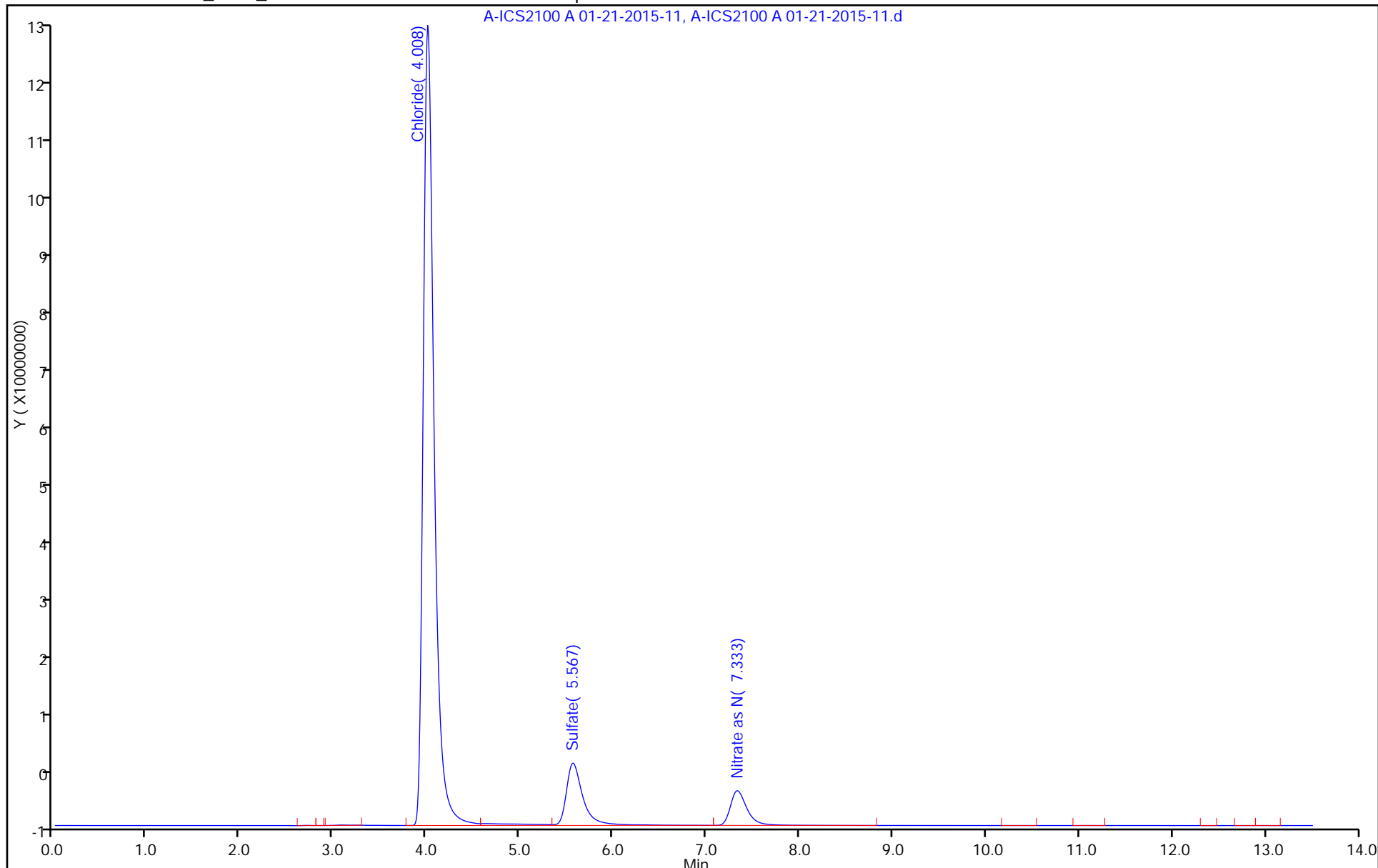
Injection Vol: 10.0 ul

Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-13-0/1-0 Lab Sample ID: 180-40617-2  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-12.d  
 Analysis Method: 300.0 Date Collected: 01/20/2015 07:37  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 15:48  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	8.5	B	0.10	0.0062
14808-79-8	Sulfate	37		1.0	0.21

TestAmerica Pittsburgh  
 Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-12.d  
 Lims ID: 180-40617-A-2 Lab Sample ID: 180-40617-2  
 Client ID: HD-CW-13-0/1-0  
 Sample Type: Client  
 Inject. Date: 21-Jan-2015 15:48:00 ALS Bottle#: 0 Worklist Smp#: 12  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-012  
 Misc. Info.: 21 180-40617-a-2  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.008	-0.008	7212352216	338.8	E
3 Sulfate	5.492	5.500	-0.008	570035743	36.9	
5 Nitrate as N	7.208	7.300	-0.092	447449116	8.46	

QC Flag Legend

Processing Flags  
 E - Exceeded Maximum Amount

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-12.d

Injection Date: 21-Jan-2015 15:48:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-40617-A-2

Lab Sample ID: 180-40617-2

Worklist Smp#: 12

Client ID: HD-CW-13-0/1-0

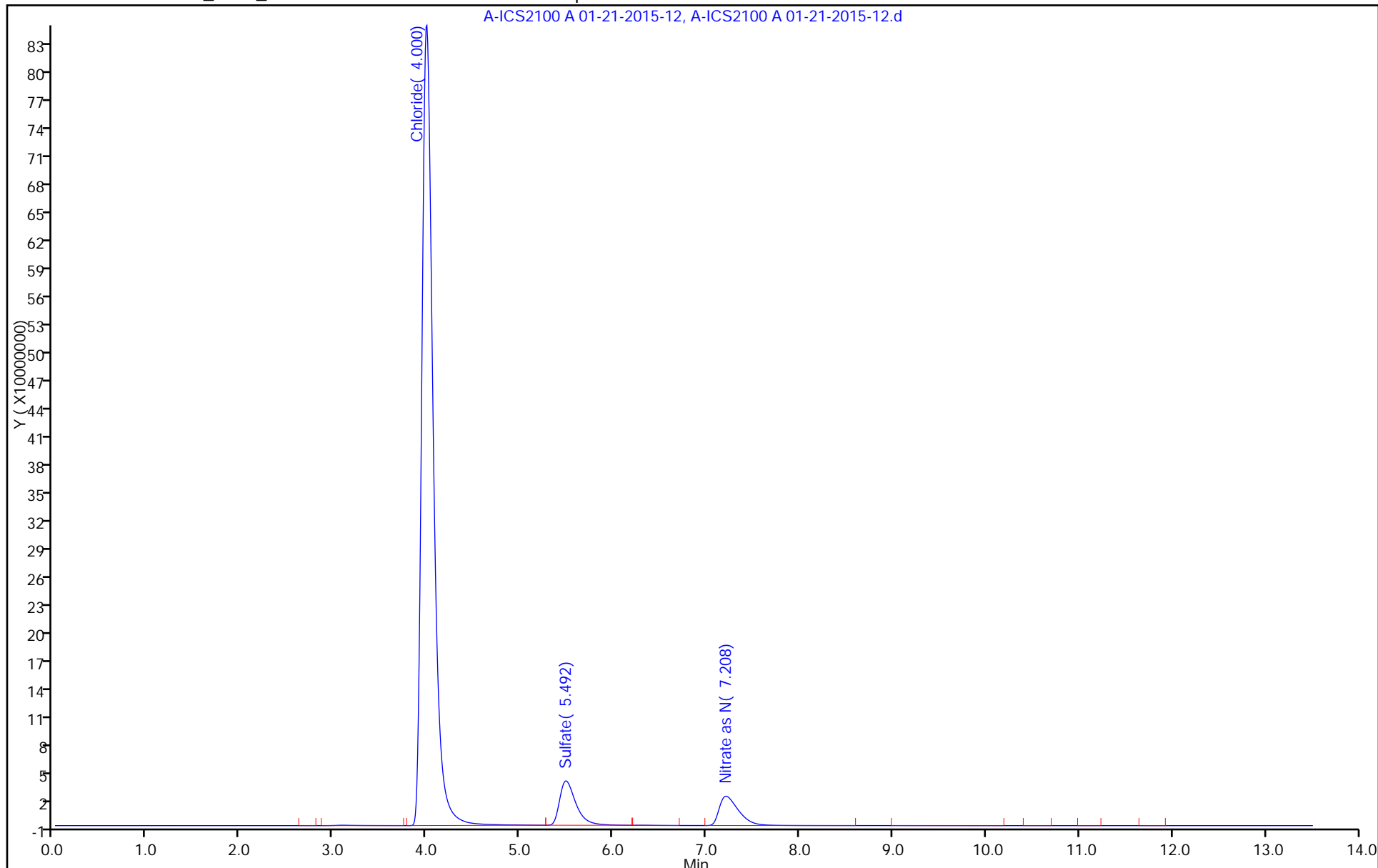
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL





FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-13-0/1-0 Lab Sample ID: 180-40617-2  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-13.d  
 Analysis Method: 300.0 Date Collected: 01/20/2015 07:37  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 16:03  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 5  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	350		5.0	0.98

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-13.d  
 Lims ID: 180-40617-A-2 Lab Sample ID: 180-40617-2  
 Client ID: HD-CW-13-0/1-0  
 Sample Type: Client  
 Inject. Date: 21-Jan-2015 16:03:00 ALS Bottle#: 0 Worklist Smp#: 13  
 Injection Vol: 10.0 ul Dil. Factor: 5.0000  
 Sample Info: 180-0005367-013  
 Misc. Info.: 22 180-40617-a-2,,,5  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.008	4.008	0.000	1473328558	69.2	
3 Sulfate	5.567	5.500	0.067	121108695	7.70	
5 Nitrate as N	7.325	7.300	0.025	86734213	1.65	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-13.d

Injection Date: 21-Jan-2015 16:03:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-40617-A-2

Lab Sample ID: 180-40617-2

Worklist Smp#: 13

Client ID: HD-CW-13-0/1-0

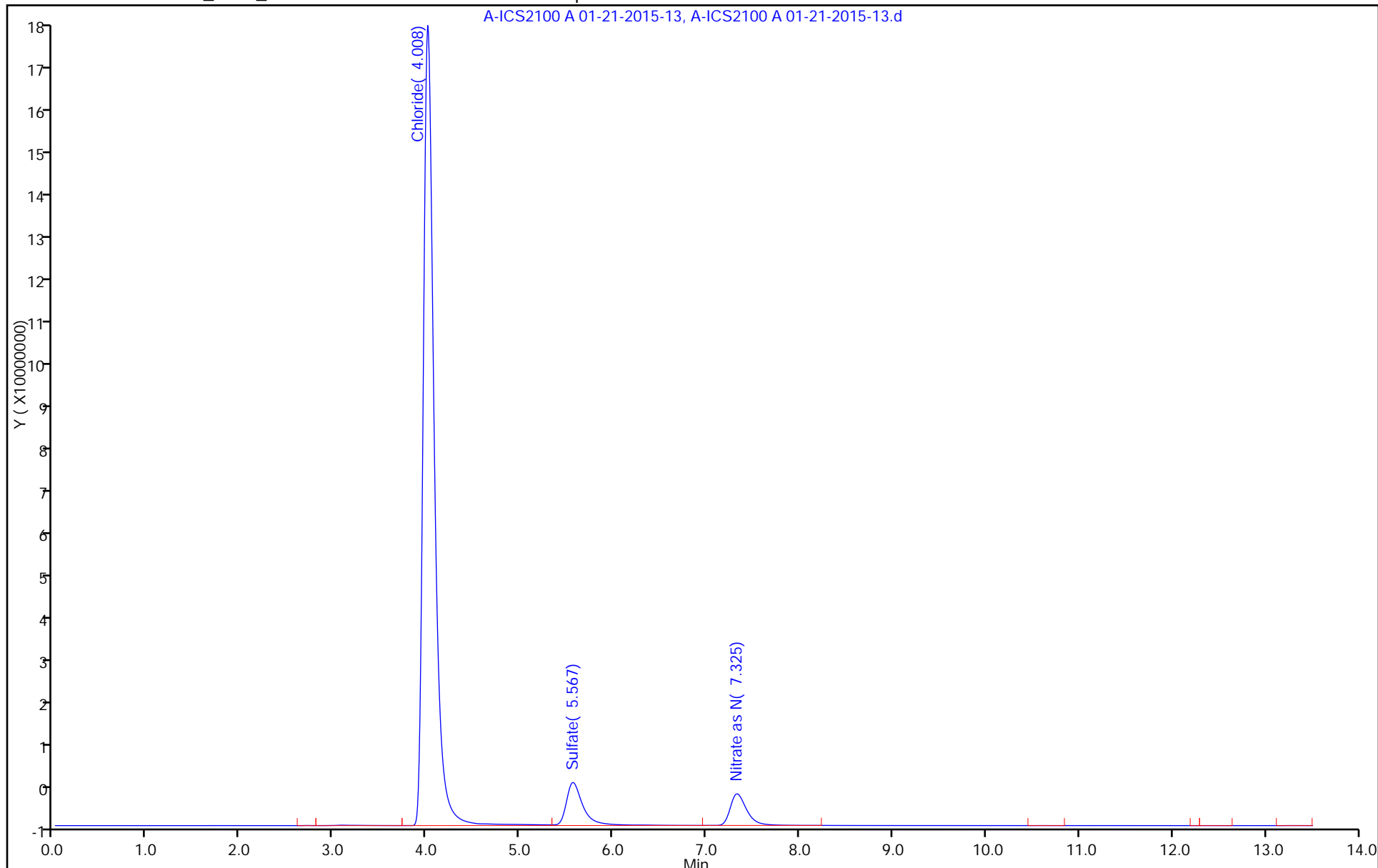
Injection Vol: 10.0 ul

Dil. Factor: 5.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-15A-0/1-0 Lab Sample ID: 180-40617-3  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-14.d  
 Analysis Method: 300.0 Date Collected: 01/20/2015 08:10  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 16:19  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	1.3	B	0.10	0.0062
16887-00-6	Chloride	110		1.0	0.20
14808-79-8	Sulfate	30		1.0	0.21

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-14.d  
 Lims ID: 180-40617-A-3 Lab Sample ID: 180-40617-3  
 Client ID: HD-CW-15A-0/1-0  
 Sample Type: Client  
 Inject. Date: 21-Jan-2015 16:19:00 ALS Bottle#: 0 Worklist Smp#: 14  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-014  
 Misc. Info.: 23 180-40617-a-3  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.008	4.008	0.000	2261458954	106.2	
3 Sulfate	5.517	5.500	0.017	471501985	30.5	
5 Nitrate as N	7.333	7.300	0.033	68060881	1.29	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-14.d

Injection Date: 21-Jan-2015 16:19:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-40617-A-3

Lab Sample ID: 180-40617-3

Worklist Smp#: 14

Client ID: HD-CW-15A-0/1-0

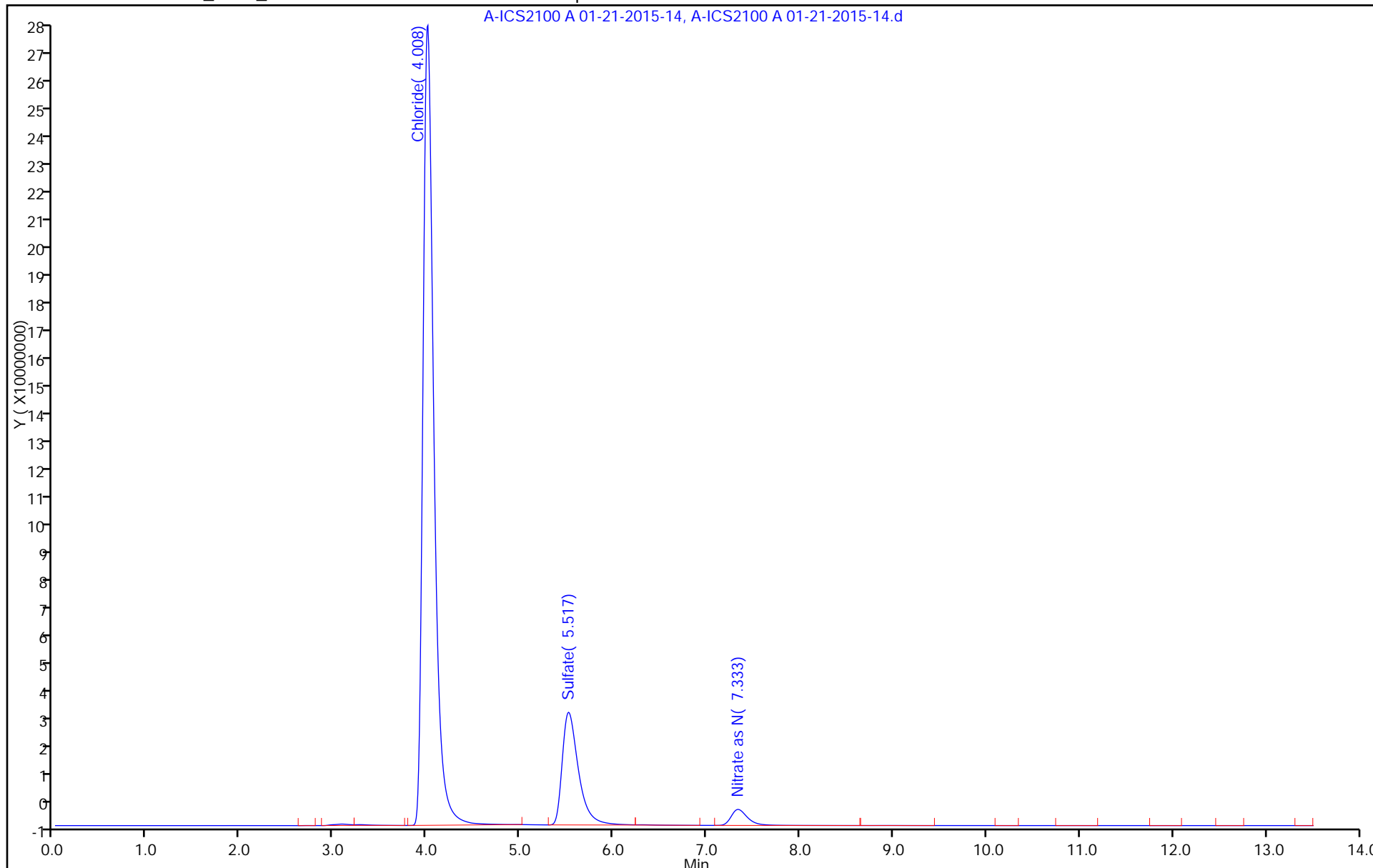
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-17-0/1-0 Lab Sample ID: 180-40617-4  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-17.d  
 Analysis Method: 300.0 Date Collected: 01/20/2015 07:43  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 17:05  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.1	B	0.10	0.0062
16887-00-6	Chloride	190		1.0	0.20
14808-79-8	Sulfate	74		1.0	0.21

TestAmerica Pittsburgh  
 Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-17.d  
 Lims ID: 180-40617-A-4 Lab Sample ID: 180-40617-4  
 Client ID: HD-CW-17-0/1-0  
 Sample Type: Client  
 Inject. Date: 21-Jan-2015 17:05:00 ALS Bottle#: 0 Worklist Smp#: 17  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-017  
 Misc. Info.: 26 180-40617-a-4  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:08 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.992	4.008	-0.016	4143814459	194.6	
3 Sulfate	5.458	5.492	-0.034	1140257490	73.9	
5 Nitrate as N	7.292	7.300	-0.008	165433591	3.13	



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-17.d

Injection Date: 21-Jan-2015 17:05:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-40617-A-4

Lab Sample ID: 180-40617-4

Worklist Smp#: 17

Client ID: HD-CW-17-0/1-0

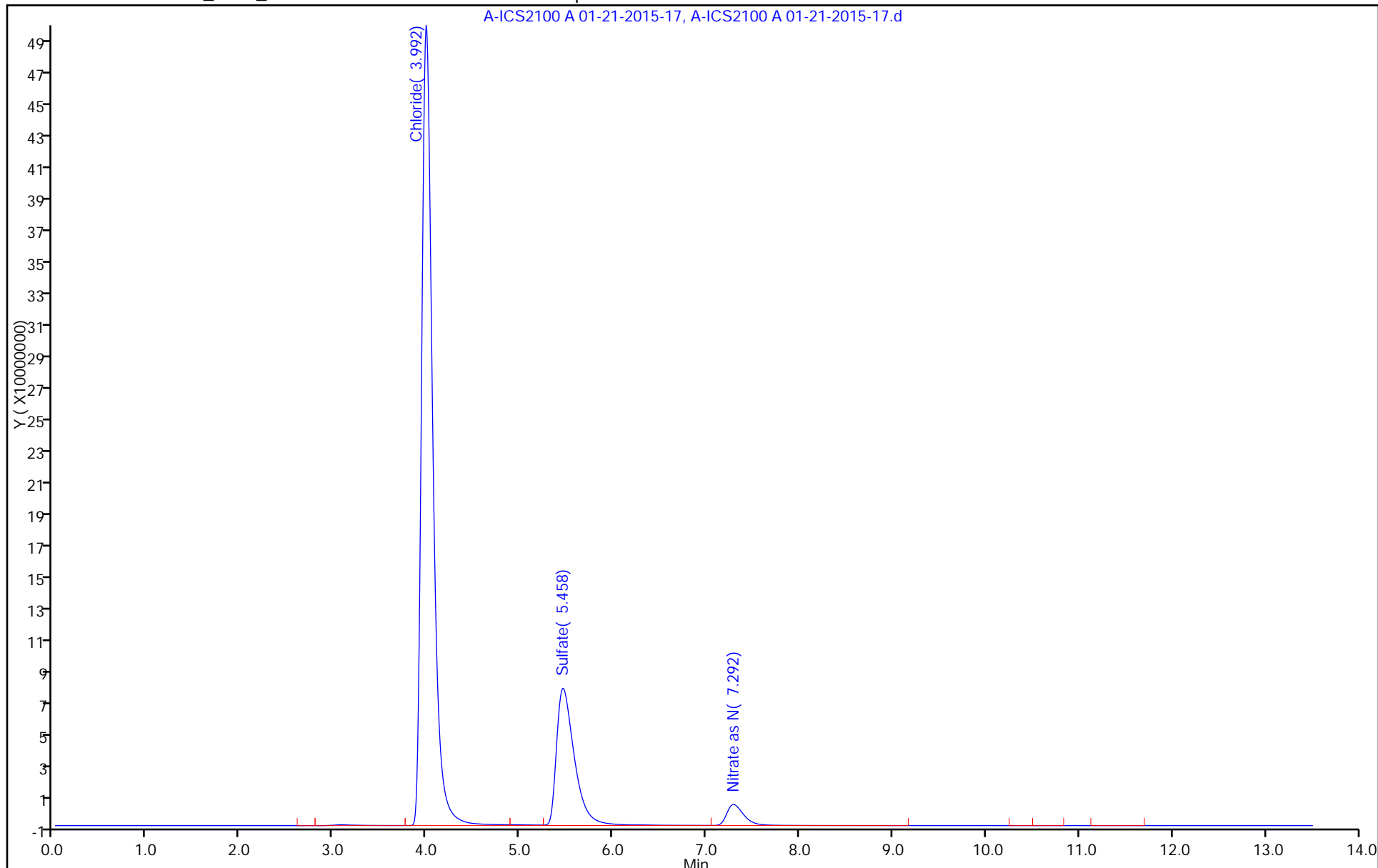
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: HD-CW-20-0/1-0 Lab Sample ID: 180-40617-5  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-19.d  
 Analysis Method: 300.0 Date Collected: 01/20/2015 07:30  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 17:35  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.9	B	0.10	0.0062
16887-00-6	Chloride	170		1.0	0.20
14808-79-8	Sulfate	30		1.0	0.21

TestAmerica Pittsburgh  
 Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-19.d  
 Lims ID: 180-40617-A-5 Lab Sample ID: 180-40617-5  
 Client ID: HD-CW-20-0/1-0  
 Sample Type: Client  
 Inject. Date: 21-Jan-2015 17:35:00 ALS Bottle#: 0 Worklist Smp#: 19  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-019  
 Misc. Info.: 28 180-40617-a-5  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:08 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	4.000	4.008	-0.008	3616824983	169.9	
3 Sulfate	5.525	5.492	0.033	463265800	29.9	
5 Nitrate as N	7.275	7.300	-0.025	203718008	3.85	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-19.d

Injection Date: 21-Jan-2015 17:35:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: 180-40617-A-5

Lab Sample ID: 180-40617-5

Worklist Smp#: 19

Client ID: HD-CW-20-0/1-0

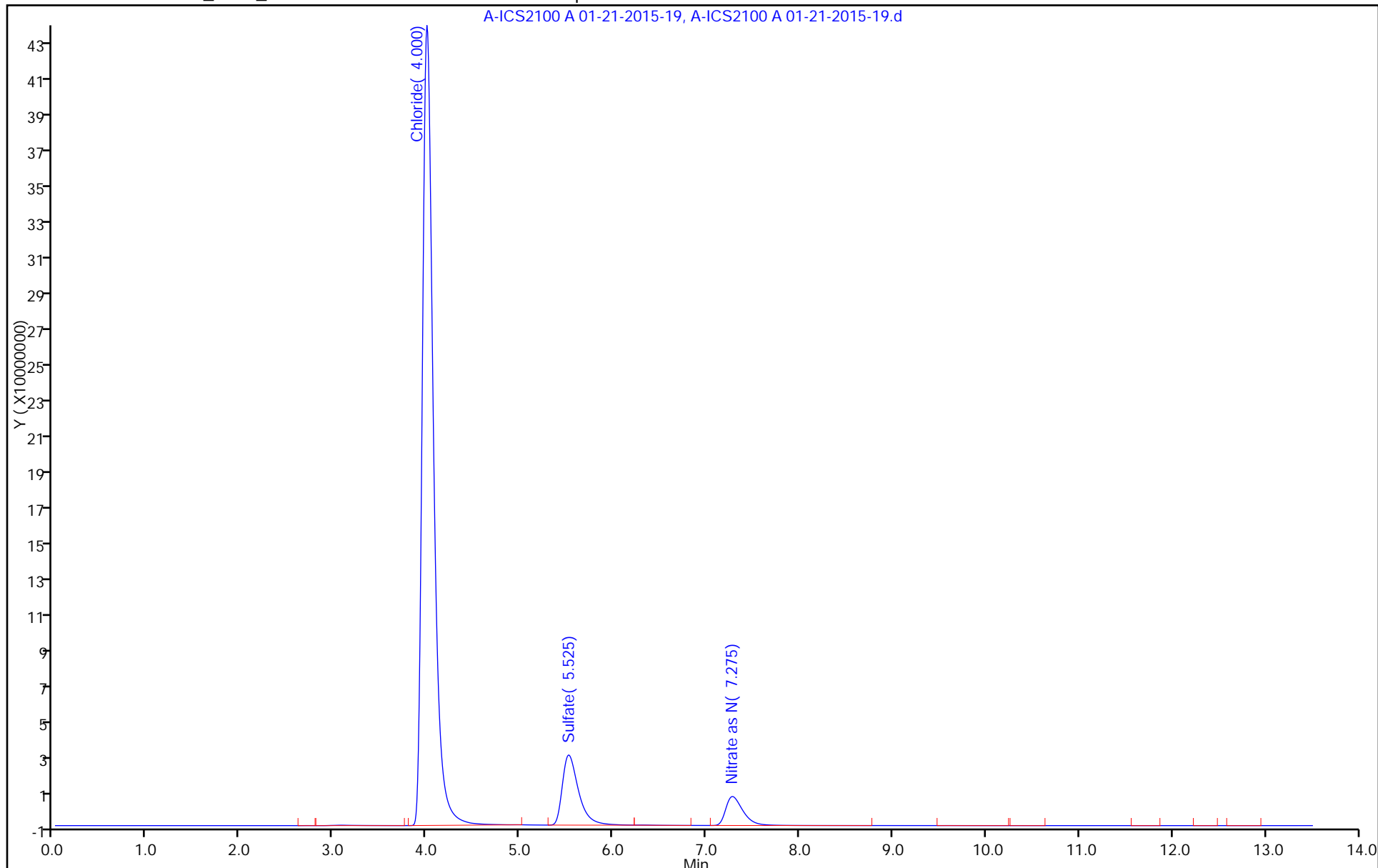
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM VI  
HPLC/IC INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 130629

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

Instrument ID: CHIC2100A GC Column: AS-18 ID: \_\_\_\_\_ Heated Purge: (Y/N) N

Calibration Start Date: 01/13/2015 12:24 Calibration End Date: 01/13/2015 14:11 Calibration ID: 21193

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-130629/2	A-ICS2100 A 01-13A-2015-
Level 2	IC 180-130629/3	A-ICS2100 A 01-13A-2015-
Level 3	ICRT 180-130629/4	A-ICS2100 A 01-13A-2015-
Level 4	IC 180-130629/5	A-ICS2100 A 01-13A-2015-
Level 5	IC 180-130629/6	A-ICS2100 A 01-13A-2015-
Level 6	IC 180-130629/7	A-ICS2100 A 01-13A-2015-
Level 7	IC 180-130629/8	A-ICS2100 A 01-13A-2015-
Level 8	IC 180-130629/9	A-ICS2100 A 01-13A-2015-

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Fluoride	2.992	2.983	2.992	2.992	2.992	2.983	2.983	2.983			2.642 - 3.342	2.988
Chloride	4.033	4.025	4.017	4.017	4.008	4.000	4.000	3.992			3.667 - 4.367	4.012
Nitrite as N	4.742	4.733	4.733	4.725	4.725	4.717	4.708	4.692			4.483 - 4.983	4.722
Sulfate	5.592	5.575	5.558	5.542	5.483	5.442	5.400	5.342			5.208 - 5.908	5.492
Bromide	6.367	6.350	6.342	6.342	6.325	6.292	6.275	6.258			5.992 - 6.692	6.319
Nitrate as N	7.417	7.392	7.375	7.367	7.333	7.275	7.242	7.208			7.125 - 7.625	7.326
Orthophosphate as P	10.408	10.383	10.350	10.342	10.225	10.125	10.042	9.942			10.100 - 10.600	10.227

FORM VI  
HPLC/IC INITIAL CALIBRATION DATA  
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 130629

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

Instrument ID: CHIC2100A GC Column: AS-18 ID: \_\_\_\_\_ Heated Purge: (Y/N) N

Calibration Start Date: 01/13/2015 12:24 Calibration End Date: 01/13/2015 14:11 Calibration ID: 21193

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-130629/2	A-ICS2100 A 01-13A-2015-
Level 2	IC 180-130629/3	A-ICS2100 A 01-13A-2015-
Level 3	ICRT 180-130629/4	A-ICS2100 A 01-13A-2015-
Level 4	IC 180-130629/5	A-ICS2100 A 01-13A-2015-
Level 5	IC 180-130629/6	A-ICS2100 A 01-13A-2015-
Level 6	IC 180-130629/7	A-ICS2100 A 01-13A-2015-
Level 7	IC 180-130629/8	A-ICS2100 A 01-13A-2015-
Level 8	IC 180-130629/9	A-ICS2100 A 01-13A-2015-

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Fluoride	2583680 3266361	2748072 3398549	2994364 3204652	3031121 3175564	Lin2	-32316.095	3162728.31							0.9970		0.9900
Chloride	22687419 20982422	21969428 21620608	22269815 20763498	20890482 21219084	Lin2	1531839.58	21283868.2							0.9990		0.9900
Nitrite as N	87713500 47138433	54620040 46703962	52785410 43221767	49057346 41927138	Lin2	2137110.99	45460584.3							0.9970		0.9900
Sulfate	17870395 15052401	16351244 15739303	16455023 14889589	15149292 15222250	Lin2	2628648.96	15383911.6							0.9990		0.9900
Bromide	9910915 9421279	10323700 9881658	10313336 9504770	9755800 9732279	LinF		9675077.71							1.0000		0.9900
Nitrate as N	44330240 51333611	50854572 54002635	54184390 52091319	51430878 53563317	Lin2	-429206.86	52967152.5							0.9990		0.9900
Orthophosphate as P	10654340 16893744	14516792 18497929	15594030 17798898	15457606 18706890	Lin2	-349118.97	17229671.9							0.9950		0.9900

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

FORM VI  
HPLC/IC INITIAL CALIBRATION DATA  
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1 Analy Batch No.: 130629

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

Instrument ID: CHIC2100A GC Column: AS-18 ID: \_\_\_\_\_ Heated Purge: (Y/N) N

Calibration Start Date: 01/13/2015 12:24 Calibration End Date: 01/13/2015 14:11 Calibration ID: 21193

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-130629/2	A-ICS2100 A 01-13A-2015-
Level 2	IC 180-130629/3	A-ICS2100 A 01-13A-2015-
Level 3	ICRT 180-130629/4	A-ICS2100 A 01-13A-2015-
Level 4	IC 180-130629/5	A-ICS2100 A 01-13A-2015-
Level 5	IC 180-130629/6	A-ICS2100 A 01-13A-2015-
Level 6	IC 180-130629/7	A-ICS2100 A 01-13A-2015-
Level 7	IC 180-130629/8	A-ICS2100 A 01-13A-2015-
Level 8	IC 180-130629/9	A-ICS2100 A 01-13A-2015-

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		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		
Fluoride	Lin2	129184 16992744	687018 24034887	1497182 31755636	3031121	8165902	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Chloride	Lin2	22687419 2162060811	109847139 3114524728	222698150 4243816805	417809637	1049121100	1.00 100	5.00 150	10.0 200	20.0	50.0
Nitrite as N	Lin2	4385675 233519809	13655010 324163256	26392705 419271383	49057346	117846083	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Sulfate	Lin2	17870395 1573930251	81756219 2233438307	164550229 3044449965	302985833	752620072	1.00 100	5.00 150	10.0 200	20.0	50.0
Bromide	LinF	1982183 197633159	10323700 285143086	20626672 389291171	39023201	94212788	0.200 20.0	1.00 30.0	2.00 40.0	4.00	10.0
Nitrate as N	Lin2	2216512 270013176	12713643 390684892	27092195 535633171	51430878	128334028	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50
Orthophosphate as P	Lin2	532717 92489647	3629198 133491737	7797015 187068903	15457606	42234361	0.0500 5.00	0.250 7.50	0.500 10.0	1.00	2.50

Curve Type Legend:

Lin2 = Linear 1/conc^2
LinF = Linear forced zero

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-2.d  
 Lims ID: ic L2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 13-Jan-2015 12:24:00 ALS Bottle#: 0 Worklist Smp#: 2  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-002  
 Misc. Info.: 30013 ic I2  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:32 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

First Level Reviewer: hartmanm

Date: 13-Jan-2015 15:14:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	129184H	0.0500	0.0511	
2 Chloride	4.033	4.017	0.016	22687419	1.00	0.99	
7 Nitrite as N	4.742	4.733	0.009	4385675	0.0500	0.0495	
3 Sulfate	5.592	5.558	0.034	17870395	1.00	0.99	
4 Bromide	6.367	6.342	0.025	1982183	0.2000	0.2049	
5 Nitrate as N	7.417	7.375	0.042	2216512	0.0500	0.0500	
6 Orthophosphate as P	10.408	10.350	0.058	532717	0.0500	0.0512	

**Reagents:**

ICSTDL2\_00144

Amount Added: 1.00

Units: mL



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-2.d

Injection Date: 13-Jan-2015 12:24:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L2

Worklist Smp#: 2

Client ID:

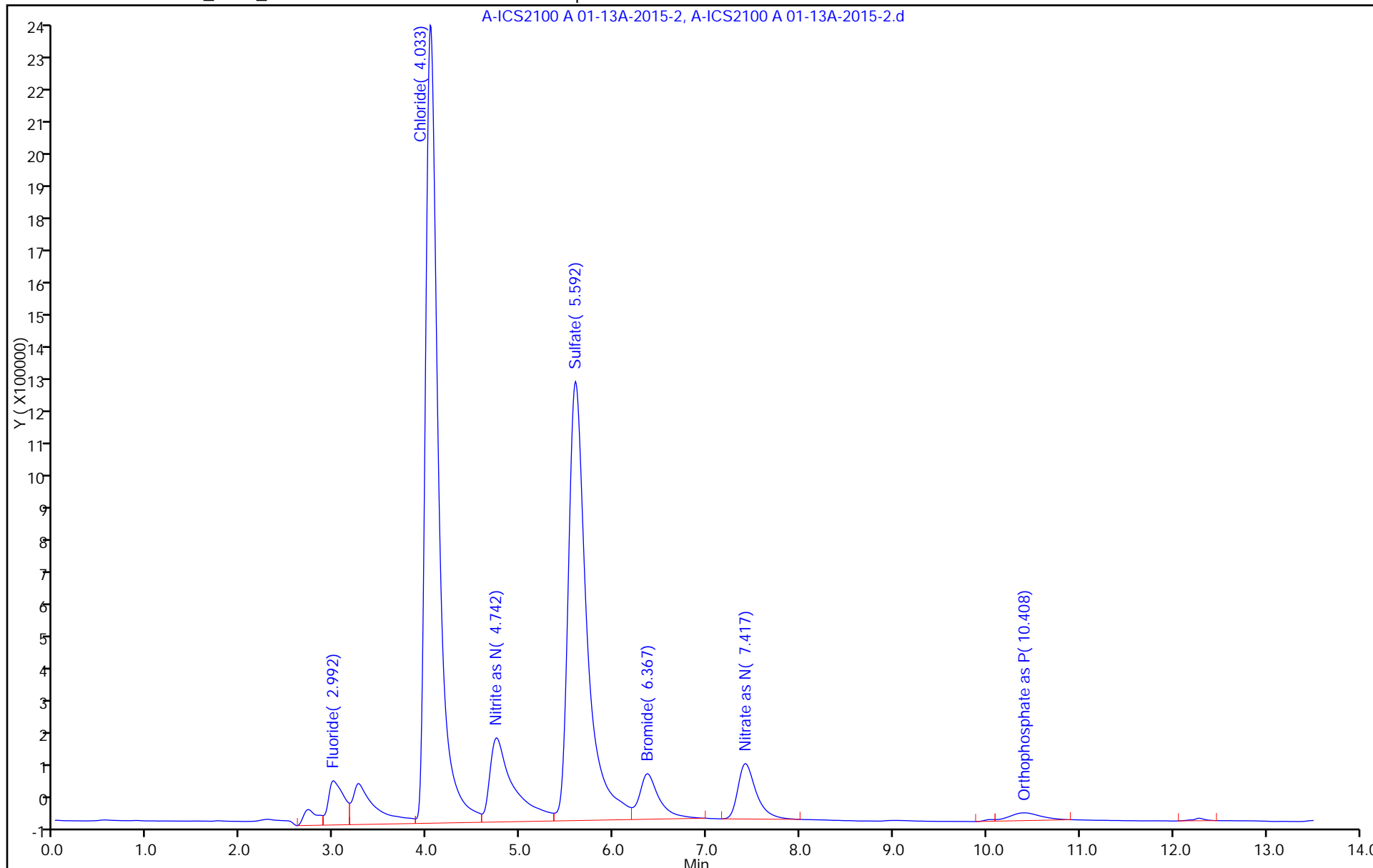
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh  
 Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-3.d  
 Lims ID: ic L3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 13-Jan-2015 12:39:00 ALS Bottle#: 0 Worklist Smp#: 3  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-003  
 Misc. Info.: 14714 ic I3  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:33 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	687018H	0.2500	0.2274	
2 Chloride	4.025	4.017	0.008	109847139	5.00	5.09	
7 Nitrite as N	4.733	4.733	0.000	13655010	0.2500	0.2534	
3 Sulfate	5.575	5.558	0.017	81756219	5.00	5.14	
4 Bromide	6.350	6.342	0.008	10323700	1.00	1.07	
5 Nitrate as N	7.392	7.375	0.017	12713643	0.2500	0.2481	
6 Orthophosphate as P	10.383	10.350	0.033	3629198	0.2500	0.2309	

Reagents:

ICSTDL3\_00182 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-3.d

Injection Date: 13-Jan-2015 12:39:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L3

Worklist Smp#: 3

Client ID:

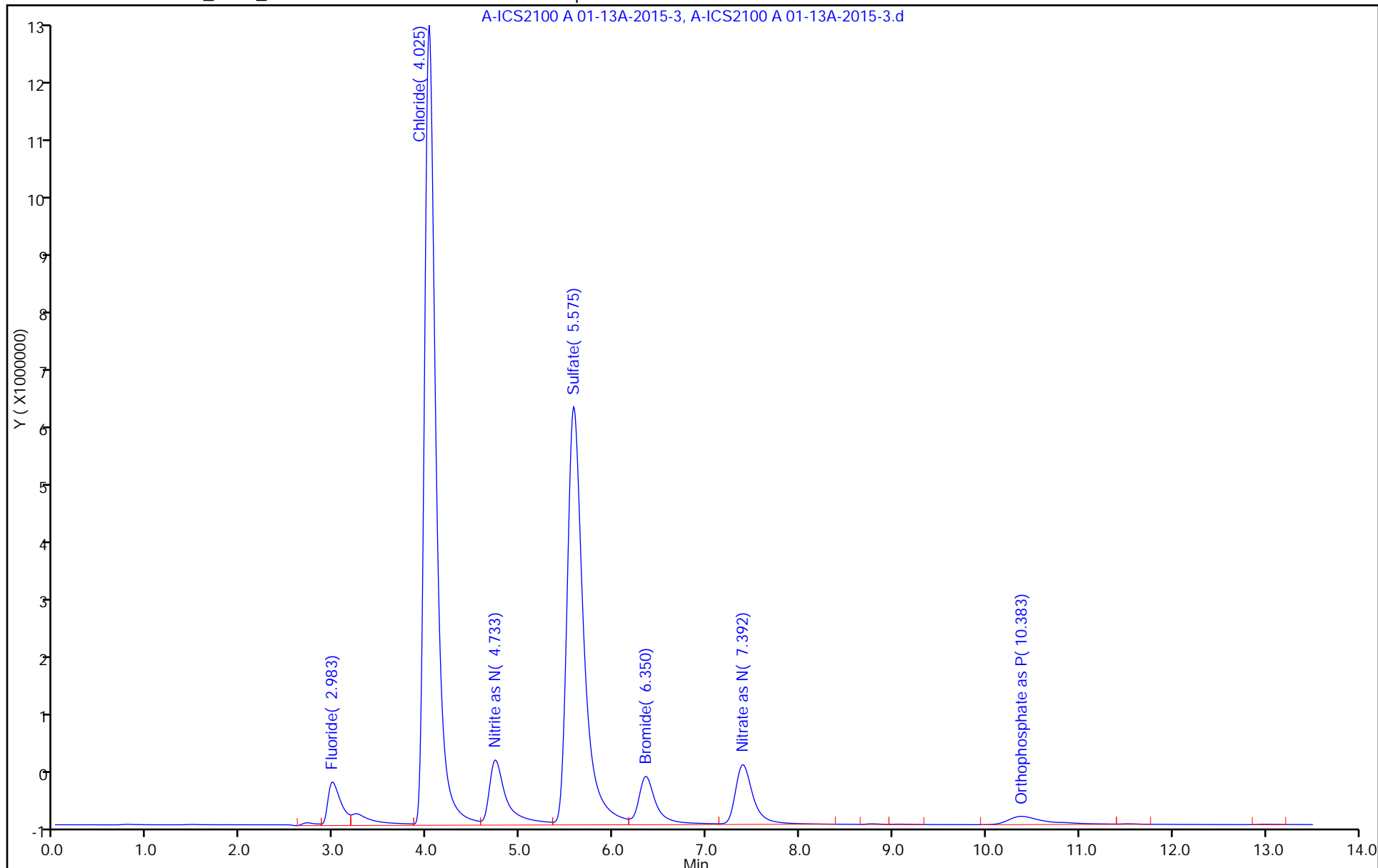
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-4.d  
 Lims ID: icrt L4  
 Client ID:  
 Sample Type: ICRT Calib Level: 4  
 Inject. Date: 13-Jan-2015 12:55:00 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-004  
 Misc. Info.: 16265 icrt I4  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:33 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

First Level Reviewer: hartmanm

Date: 13-Jan-2015 15:08:44

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	1497182H	0.5000	0.4836	
2 Chloride	4.017	4.017	0.000	222698150	10.0	10.4	
7 Nitrite as N	4.733	4.733	0.000	26392705	0.5000	0.5336	
3 Sulfate	5.558	5.558	0.000	164550229	10.0	10.5	
4 Bromide	6.342	6.342	0.000	20626672	2.00	2.13	
5 Nitrate as N	7.375	7.375	0.000	27092195	0.5000	0.5196	
6 Orthophosphate as P	10.350	10.350	0.000	7797015	0.5000	0.4728	

**Reagents:**

ICSTDL4\_00121

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-4.d

Injection Date: 13-Jan-2015 12:55:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: icrt L4

Worklist Smp#: 4

Client ID:

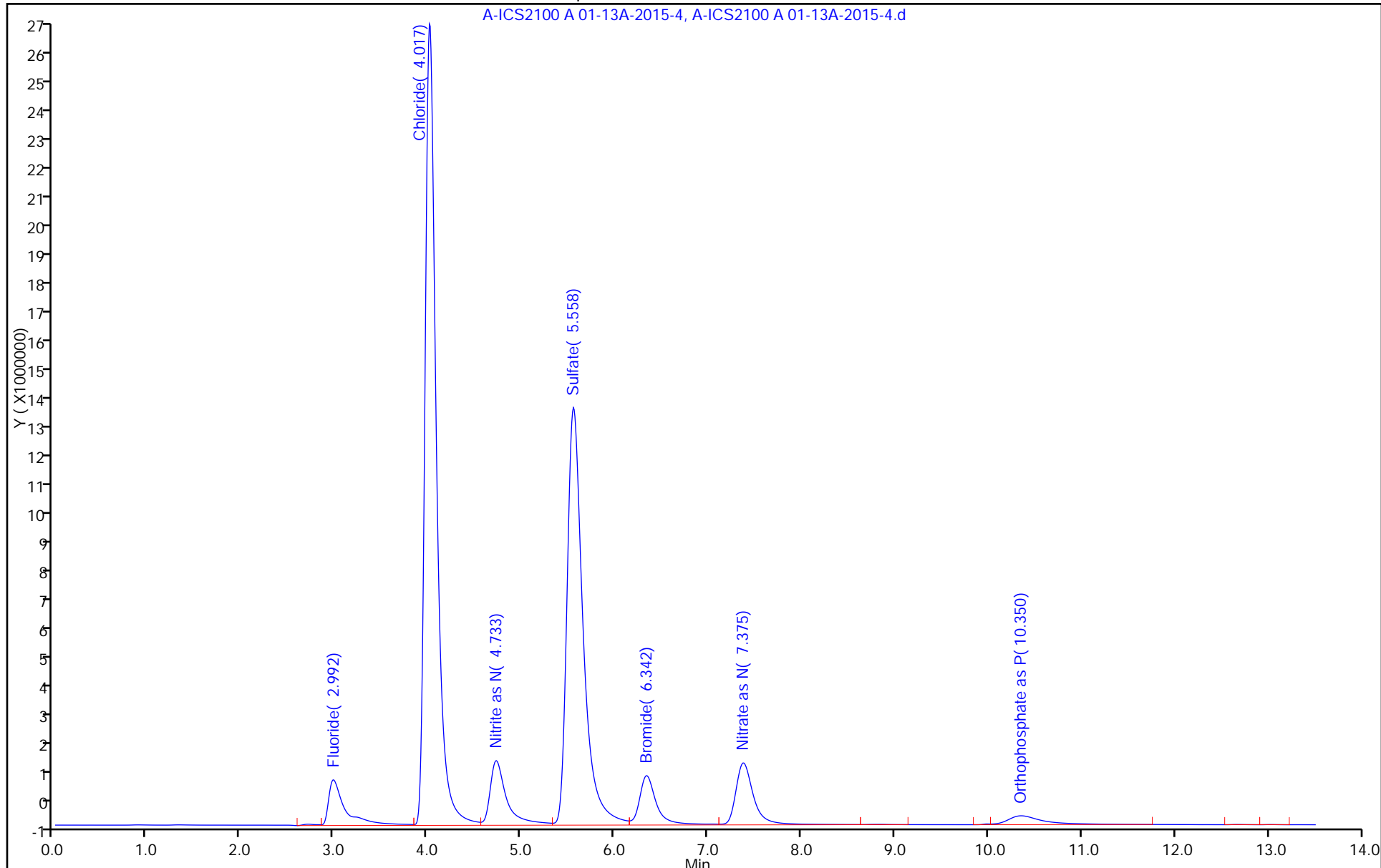
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-5.d  
 Lims ID: ic L5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 13-Jan-2015 13:10:00 ALS Bottle#: 0 Worklist Smp#: 5  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-005  
 Misc. Info.: 15679 ic I5  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:34 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	3031121H	1.00	0.9686	
2 Chloride	4.017	4.017	0.000	417809637	20.0	19.6	
7 Nitrite as N	4.725	4.733	-0.008	49057346	1.00	1.03	
3 Sulfate	5.542	5.558	-0.016	302985833	20.0	19.5	
4 Bromide	6.342	6.342	0.000	39023201	4.00	4.03	
5 Nitrate as N	7.367	7.375	-0.008	51430878	1.00	0.9791	
6 Orthophosphate as P	10.342	10.350	-0.008	15457606	1.00	0.9174	

**Reagents:**

ICSTDL5\_00120

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-5.d

Injection Date: 13-Jan-2015 13:10:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L5

Worklist Smp#: 5

Client ID:

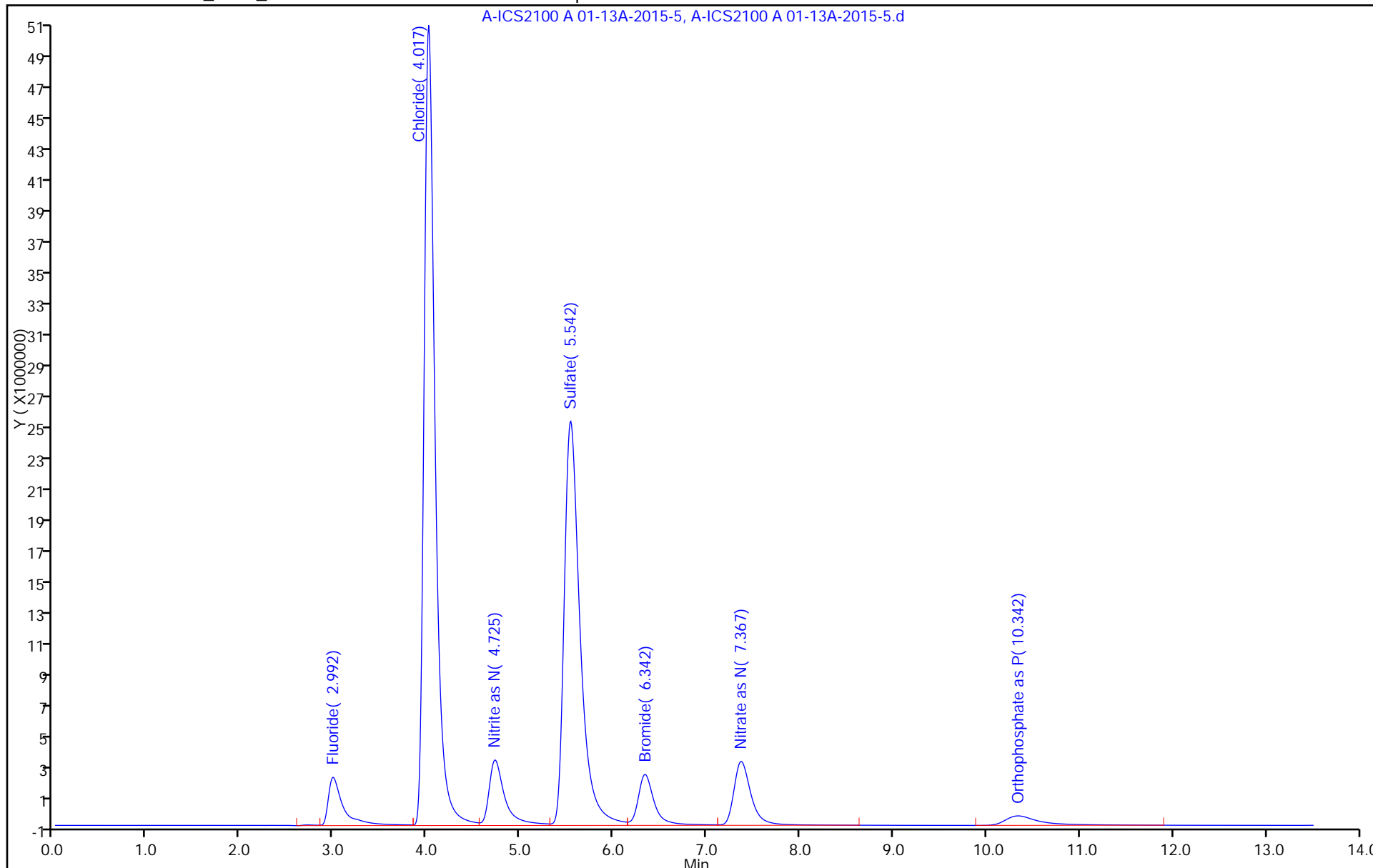
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-6.d  
 Lims ID: ic L6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 13-Jan-2015 13:25:00 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-006  
 Misc. Info.: 15331 ic l6  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:34 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 18:17:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8165902H	2.50	2.59	
2 Chloride	4.008	4.017	-0.009	1049121100	50.0	49.2	
7 Nitrite as N	4.725	4.733	-0.008	117846083	2.50	2.55	
3 Sulfate	5.483	5.558	-0.075	752620072	50.0	48.8	
4 Bromide	6.325	6.342	-0.017	94212788	10.0	9.74	
5 Nitrate as N	7.333	7.375	-0.042	128334028	2.50	2.43	
6 Orthophosphate as P	10.225	10.350	-0.125	42234361	2.50	2.47	

Reagents:

ICSTDL6\_00189 Amount Added: 1.00 Units: mL



TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-6.d

Injection Date: 13-Jan-2015 13:25:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L6

Worklist Smp#: 6

Client ID:

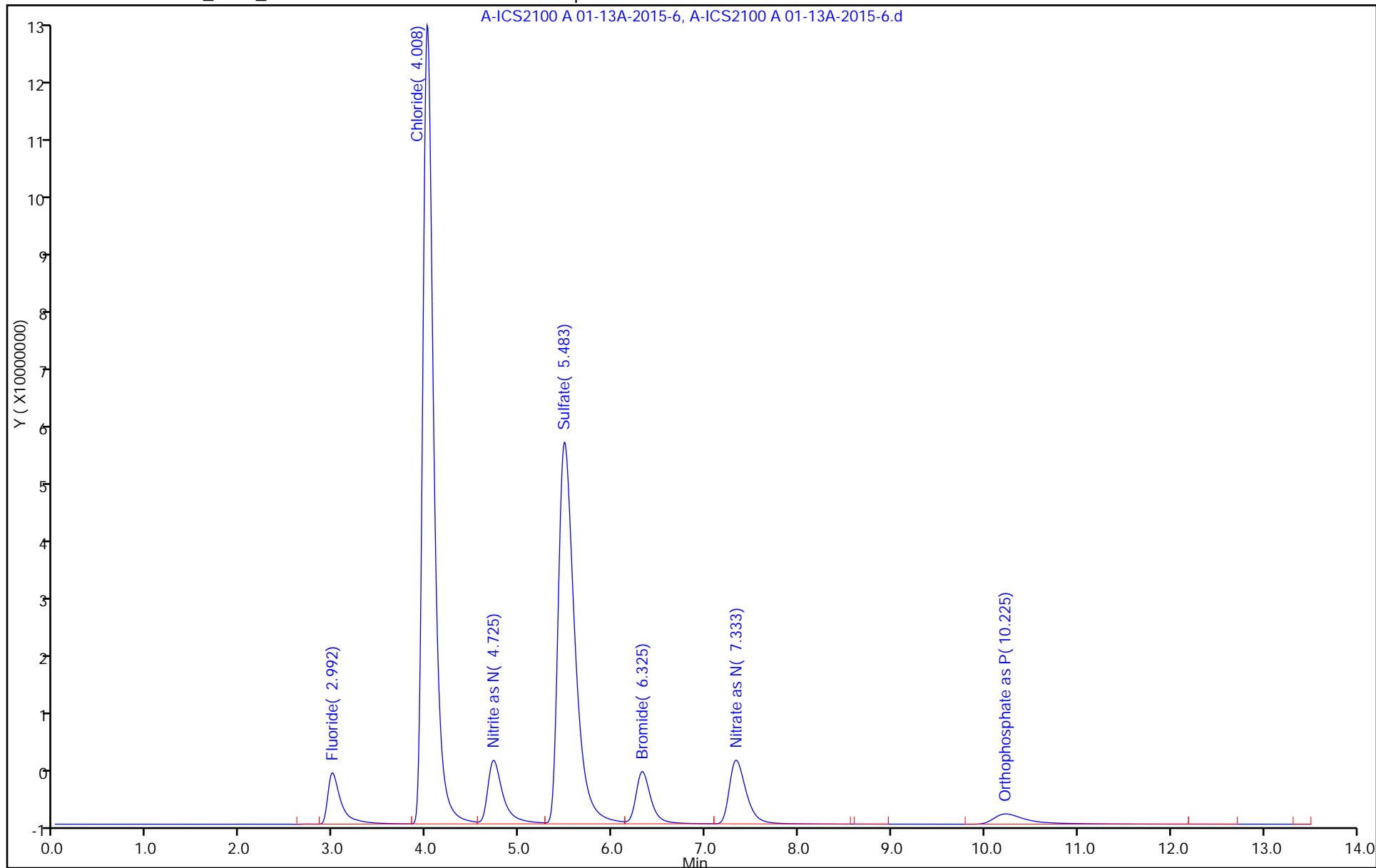
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-7.d  
 Lims ID: ic L7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 13-Jan-2015 13:41:00 ALS Bottle#: 0 Worklist Smp#: 7  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-007  
 Misc. Info.: 8785 ic I7  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:35 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:21:01

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	16992744H	5.00	5.38	
2 Chloride	4.000	4.017	-0.017	2162060811	100.0	101.5	
7 Nitrite as N	4.717	4.733	-0.016	233519809	5.00	5.09	
3 Sulfate	5.442	5.558	-0.116	1573930251	100.0	102.1	
4 Bromide	6.292	6.342	-0.050	197633159	20.0	20.4	
5 Nitrate as N	7.275	7.375	-0.100	270013176	5.00	5.11	
6 Orthophosphate as P	10.125	10.350	-0.225	92489647	5.00	5.39	

Reagents:

ICSTDL7\_00124 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-7.d

Injection Date: 13-Jan-2015 13:41:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L7

Worklist Smp#: 7

Client ID:

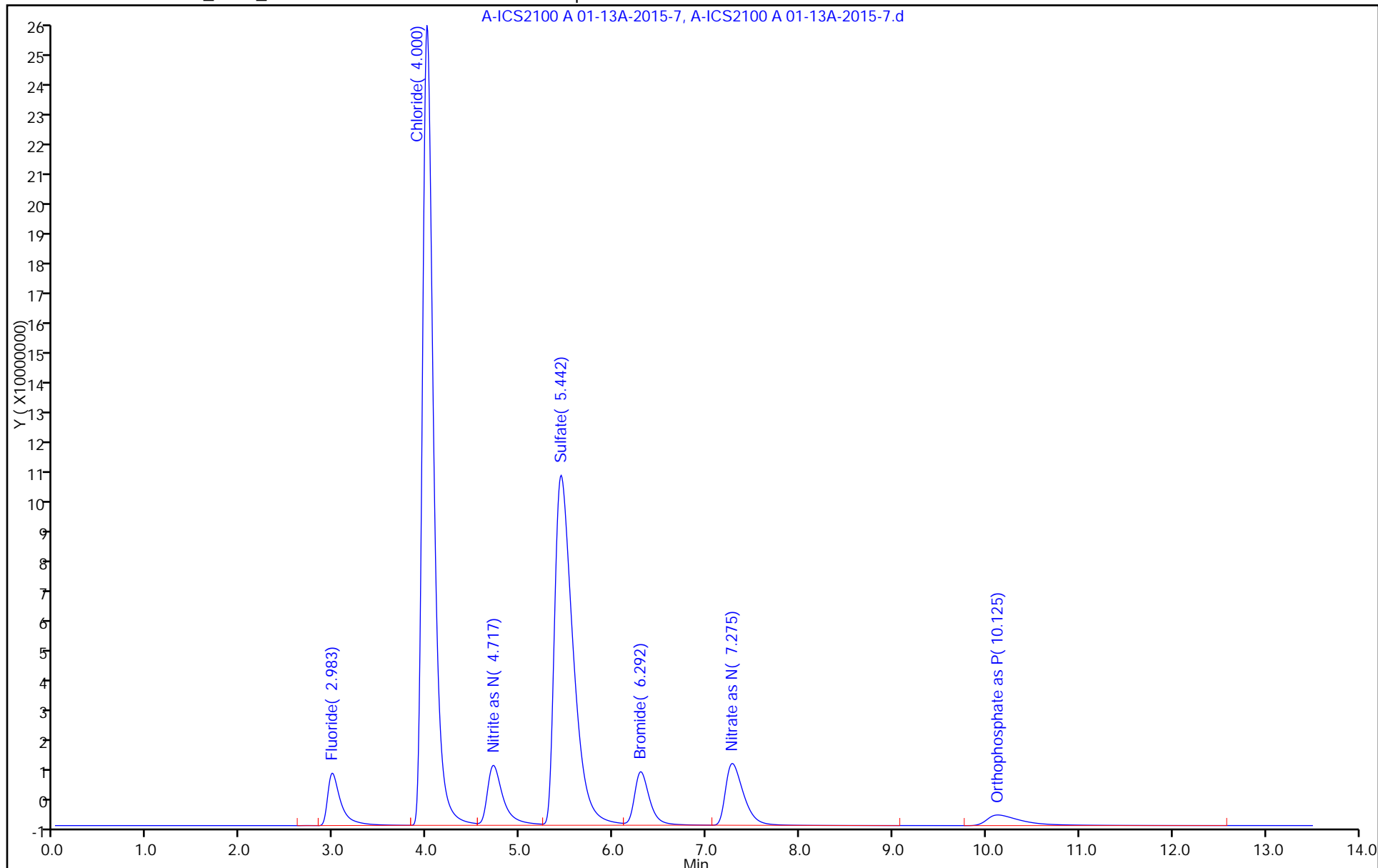
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-8.d  
 Lims ID: ic L8  
 Client ID:  
 Sample Type: IC Calib Level: 8  
 Inject. Date: 13-Jan-2015 13:56:00 ALS Bottle#: 0 Worklist Smp#: 8  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-008  
 Misc. Info.: 10979 ic l8  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:35 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:19:28

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	24034887H	7.50	7.61	
2 Chloride	4.000	4.017	-0.017	3114524728	150.0	146.3	
7 Nitrite as N	4.708	4.733	-0.025	324163256	7.50	7.08	
3 Sulfate	5.400	5.558	-0.158	2233438307	150.0	145.0	
4 Bromide	6.275	6.342	-0.067	285143086	30.0	29.5	
5 Nitrate as N	7.242	7.375	-0.133	390684892	7.50	7.38	
6 Orthophosphate as P	10.042	10.350	-0.308	133491737	7.50	7.77	

Reagents:

ICSTDL8\_00095 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-8.d

Injection Date: 13-Jan-2015 13:56:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L8

Worklist Smp#: 8

Client ID:

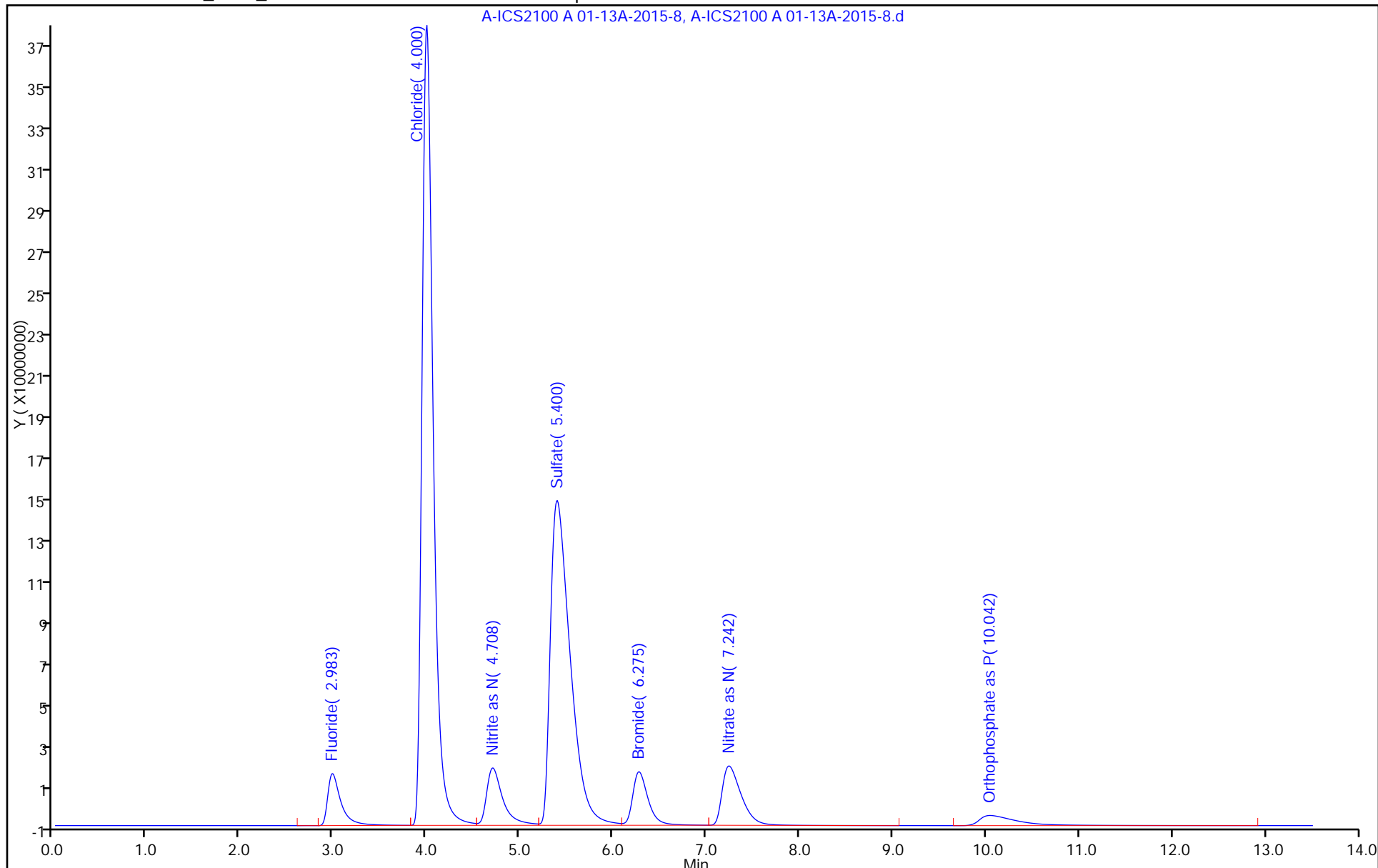
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Lims ID: ic L9  
 Client ID:  
 Sample Type: IC Calib Level: 9  
 Inject. Date: 13-Jan-2015 14:11:00 ALS Bottle#: 0 Worklist Smp#: 9  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005255-009  
 Misc. Info.: 29899 ic I9  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 13-Jan-2015 18:17:36 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK017

First Level Reviewer: hartmanm Date: 13-Jan-2015 15:18:50

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.983	2.992	-0.009	31755636H	10.0	10.1	
2 Chloride	3.992	4.017	-0.025	4243816805	200.0	199.3	
7 Nitrite as N	4.692	4.733	-0.041	419271383	10.0	9.18	
3 Sulfate	5.342	5.558	-0.216	3044449965	200.0	197.7	
4 Bromide	6.258	6.342	-0.084	389291171	40.0	40.2	
5 Nitrate as N	7.208	7.375	-0.167	535633171	10.0	10.1	
6 Orthophosphate as P	9.942	10.350	-0.408	187068903	10.0	10.9	

Reagents:

ICSTDL9\_00100 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d

Injection Date: 13-Jan-2015 14:11:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ic L9

Worklist Smp#: 9

Client ID:

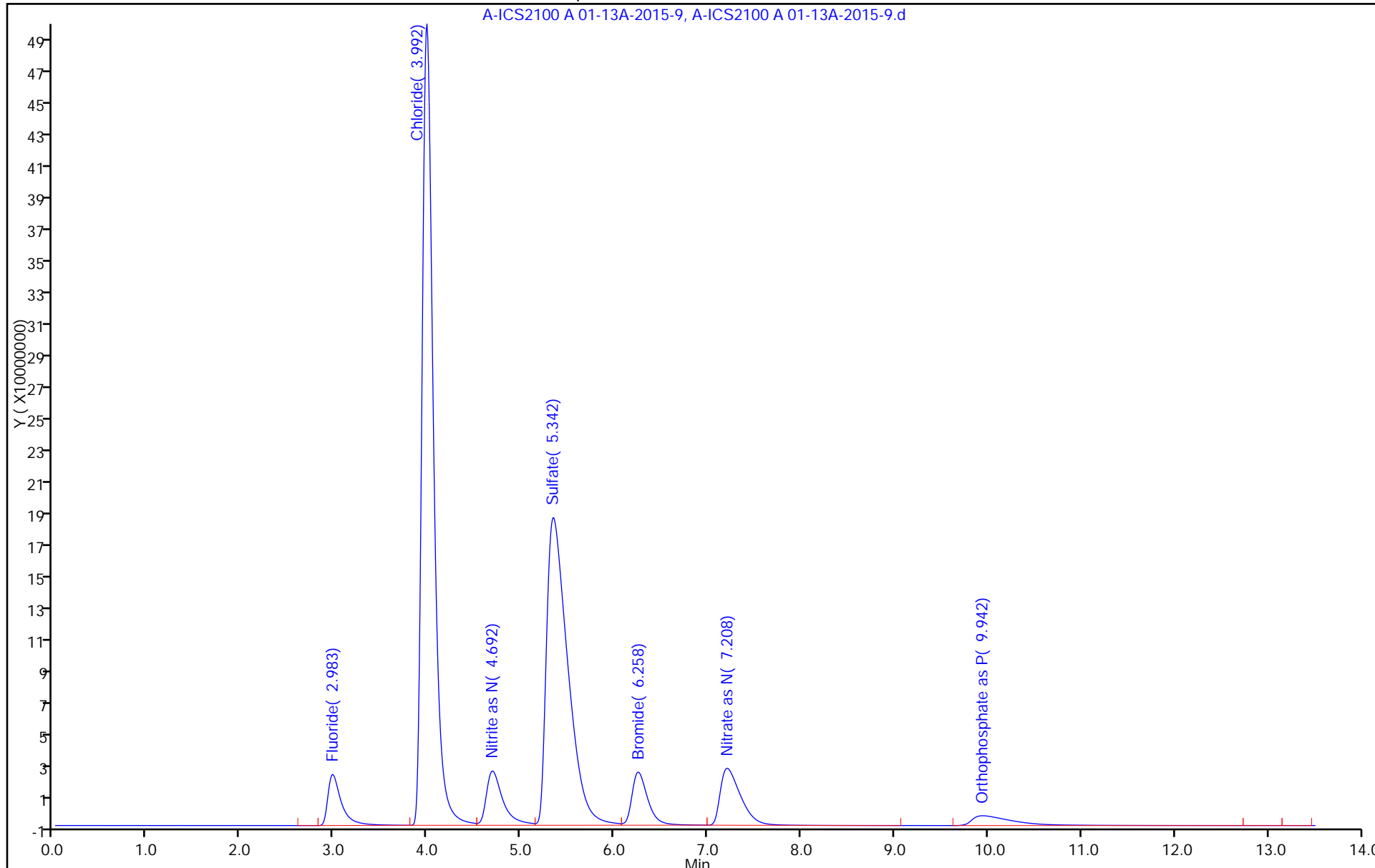
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-131352/2 Calibration Date: 01/21/2015 11:00  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-2.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3438336		3.27	3.00	9.1	10.0
Chloride	Lin2		22168539		62.4	60.0	4.0	10.0
Nitrite as N	Lin2		49242089		3.20	3.00	6.8	10.0
Sulfate	Lin2		16268899		63.3	60.0	5.5	10.0
Bromide	LinF		10191856		12.6	12.0	5.3	10.0
Nitrate as N	Lin2		54043778		3.07	3.00	2.3	10.0
Orthophosphate as P	Lin2		16260724		2.85	3.00	-4.9	10.0



FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 180-131352/2 Calibration Date: 01/21/2015 11:00  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-2.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.00	3.66	4.36
Nitrite as N	4.70	4.47	4.97
Sulfate	5.48	5.14	5.84
Bromide	6.29	5.95	6.65
Nitrate as N	7.29	7.05	7.55
Orthophosphate as P	10.28	10.05	10.55

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-2.d  
 Lims ID: icv  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 21-Jan-2015 11:00:00 ALS Bottle#: 0 Worklist Smp#: 2  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-002  
 Misc. Info.: 11 icv  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist:  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:02:36 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	10315009H	3.00	3.27	
2 Chloride	4.000	4.008	-0.008	1330112319	60.0	62.4	
7 Nitrite as N	4.700	4.717	-0.017	147785357	3.00	3.20	
3 Sulfate	5.483	5.492	-0.009	976133951	60.0	63.3	
4 Bromide	6.292	6.300	-0.008	122302277	12.0	12.6	
5 Nitrate as N	7.292	7.300	-0.008	162131334	3.00	3.07	
6 Orthophosphate as P	10.283	10.300	-0.017	48782172	3.00	2.85	

Reagents:

icicv\_01178 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-2.d

Injection Date: 21-Jan-2015 11:00:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: icv

Worklist Smp#: 2

Client ID:

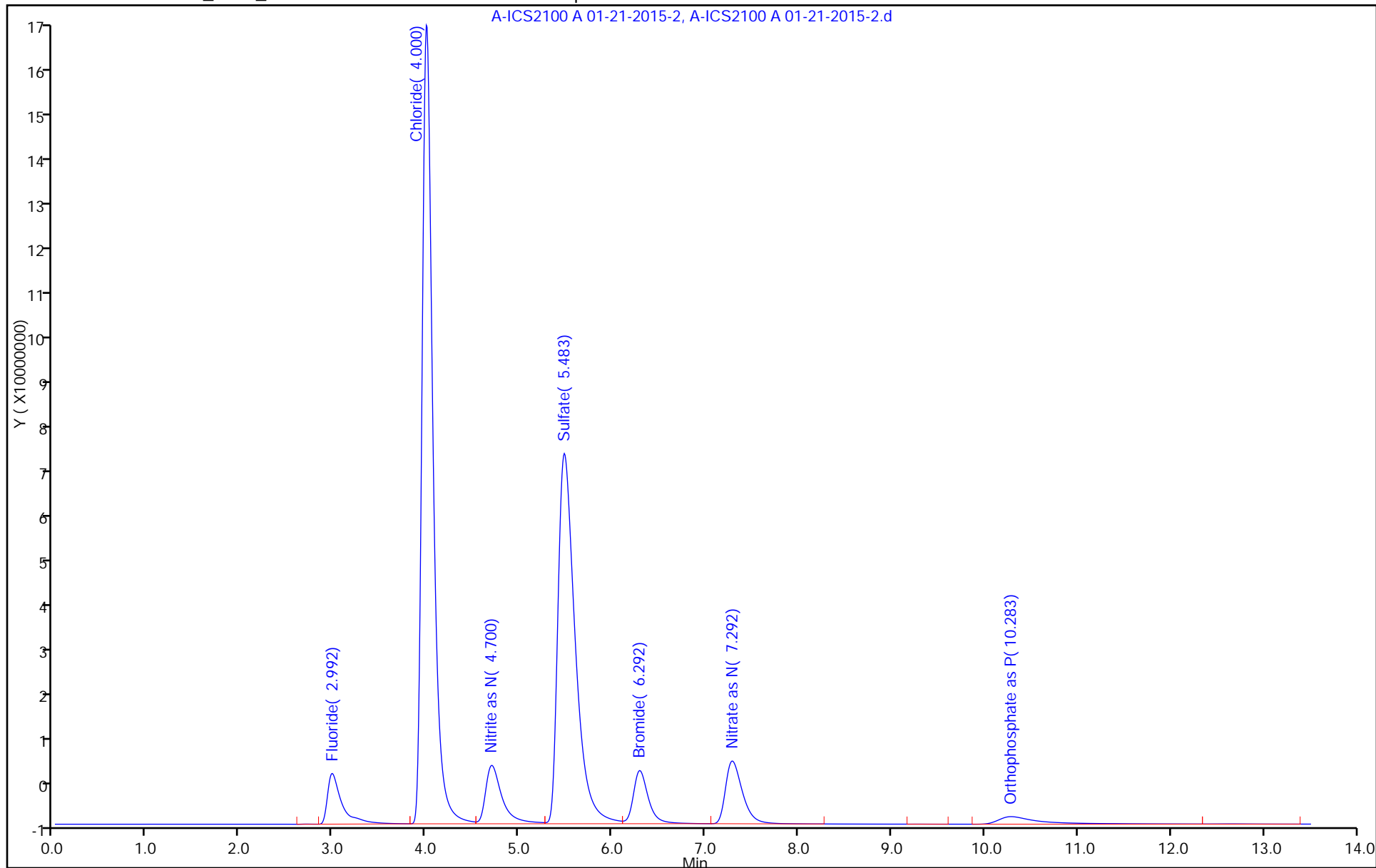
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-131352/3 Calibration Date: 01/21/2015 11:15  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-3.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3586912		2.85	2.50	13.8*	10.0
Chloride	Lin2		22669341		53.2	50.0	6.4	10.0
Nitrite as N	Lin2		49887716		2.70	2.50	7.9	10.0
Sulfate	Lin2		16485652		53.4	50.0	6.8	10.0
Bromide	LinF		10359119		10.7	10.0	7.1	10.0
Nitrate as N	Lin2		55947062		2.65	2.50	6.0	10.0
Orthophosphate as P	Lin2		14718222		2.16	2.50	-13.8*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-131352/3 Calibration Date: 01/21/2015 11:15  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-3.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.01	3.66	4.36
Nitrite as N	4.72	4.47	4.97
Sulfate	5.50	5.15	5.85
Bromide	6.30	5.95	6.65
Nitrate as N	7.30	7.05	7.55
Orthophosphate as P	10.31	10.06	10.56

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-3.d  
 Lims ID: ccv  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 21-Jan-2015 11:15:00 ALS Bottle#: 0 Worklist Smp#: 3  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-003  
 Misc. Info.: 12 ccv  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8967280H	2.50	2.85	
2 Chloride	4.008	4.008	0.000	1133467067	50.0	53.2	
7 Nitrite as N	4.717	4.717	0.000	124719290	2.50	2.70	
3 Sulfate	5.500	5.500	0.000	824282578	50.0	53.4	
4 Bromide	6.300	6.300	0.000	103591190	10.0	10.7	
5 Nitrate as N	7.300	7.300	0.000	139867655	2.50	2.65	
6 Orthophosphate as P	10.308	10.308	0.000	36795555	2.50	2.16	

Reagents:

icccv\_01146 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-3.d

Injection Date: 21-Jan-2015 11:15:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 3

Client ID:

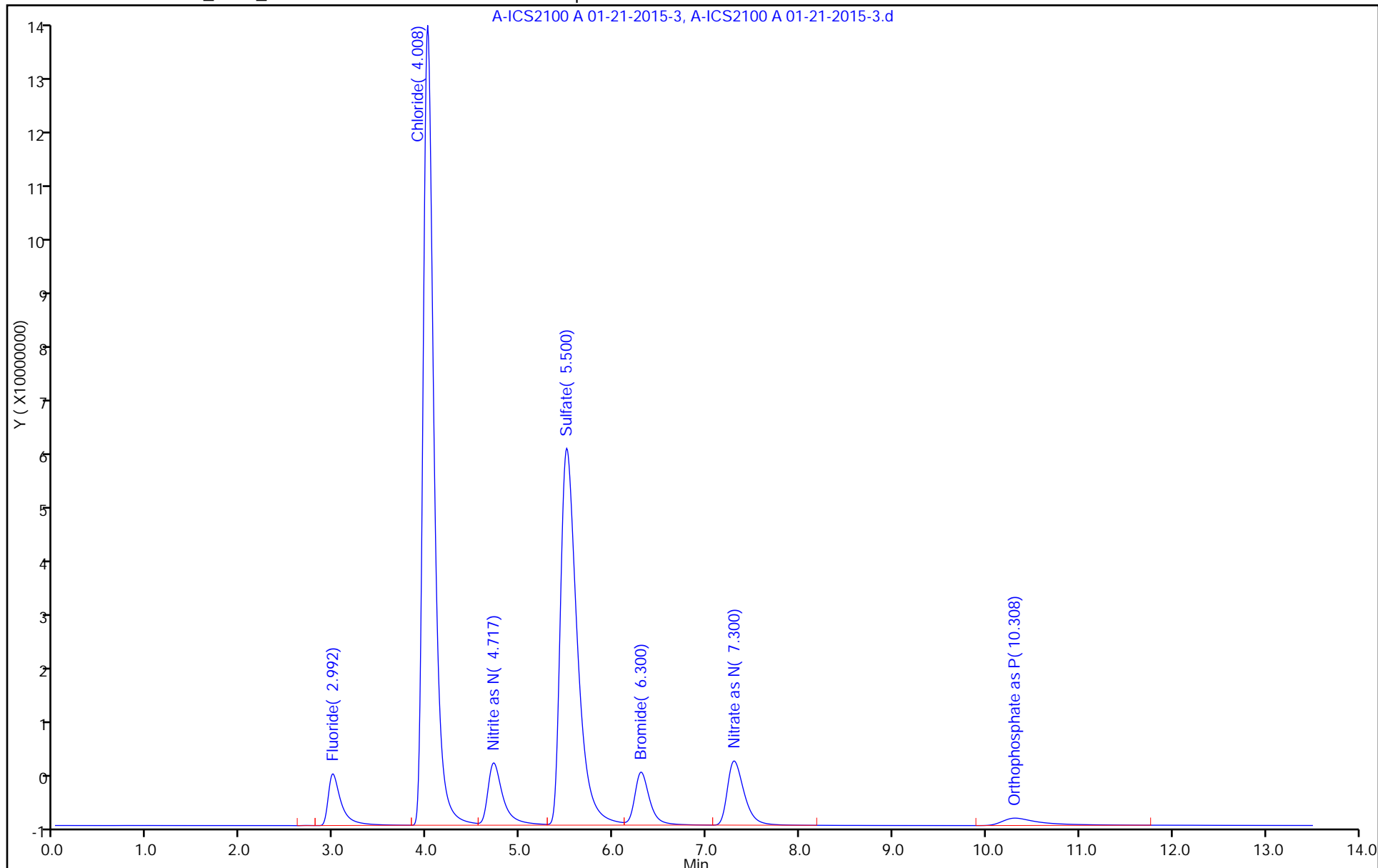
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-131352/15 Calibration Date: 01/21/2015 16:34  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-15.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3573001		2.83	2.50	13.4*	10.0
Chloride	Lin2		22691774		53.2	50.0	6.5	10.0
Nitrite as N	Lin2		49800238		2.69	2.50	7.7	10.0
Sulfate	Lin2		16465394		53.3	50.0	6.7	10.0
Bromide	LinF		10352938		10.7	10.0	7.0	10.0
Nitrate as N	Lin2		55943353		2.65	2.50	5.9	10.0
Orthophosphate as P	Lin2		14767544		2.16	2.50	-13.5*	10.0



FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-131352/15 Calibration Date: 01/21/2015 16:34  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-15.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.01	3.66	4.36
Nitrite as N	4.72	4.47	4.97
Sulfate	5.49	5.14	5.84
Bromide	6.30	5.95	6.65
Nitrate as N	7.30	7.05	7.55
Orthophosphate as P	10.30	10.05	10.55

TestAmerica Pittsburgh  
 Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-15.d  
 Lims ID: ccv  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 21-Jan-2015 16:34:00 ALS Bottle#: 0 Worklist Smp#: 15  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-015  
 Misc. Info.: 24 ccv  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:08 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8932502H	2.50	2.83	
2 Chloride	4.008	4.008	0.000	1134588681	50.0	53.2	
7 Nitrite as N	4.717	4.717	0.000	124500594	2.50	2.69	
3 Sulfate	5.492	5.492	0.000	823269700	50.0	53.3	
4 Bromide	6.300	6.300	0.000	103529376	10.0	10.7	
5 Nitrate as N	7.300	7.300	0.000	139858383	2.50	2.65	
6 Orthophosphate as P	10.300	10.300	0.000	36918861	2.50	2.16	

Reagents:

icccv\_01146 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-15.d

Injection Date: 21-Jan-2015 16:34:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 15

Client ID:

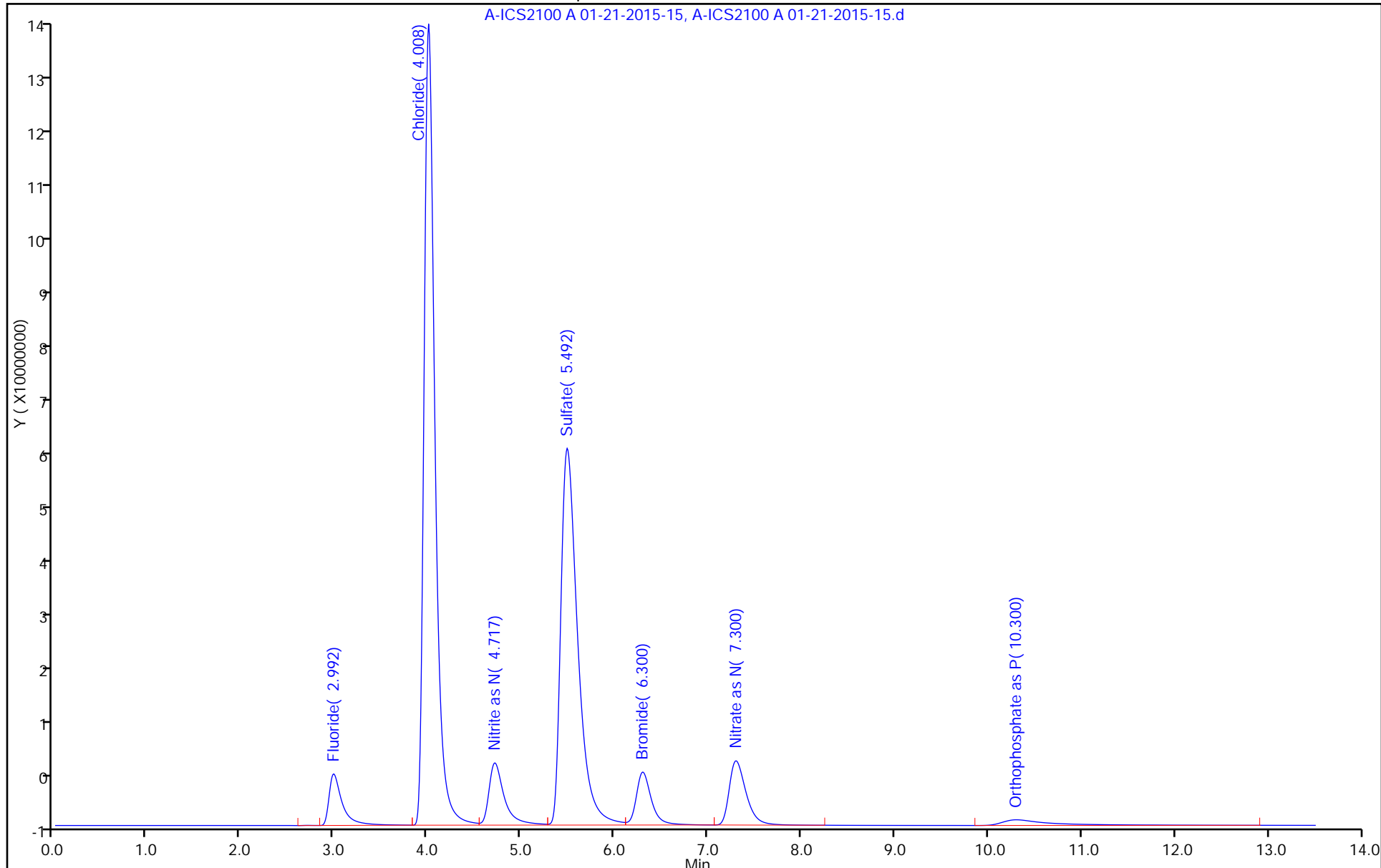
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM VII  
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-131352/27 Calibration Date: 01/21/2015 19:38  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-27.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		3581992		2.84	2.50	13.7*	10.0
Chloride	Lin2		22611478		53.0	50.0	6.1	10.0
Nitrite as N	Lin2		49737834		2.69	2.50	7.5	10.0
Sulfate	Lin2		16418930		53.2	50.0	6.4	10.0
Bromide	LinF		10344113		10.7	10.0	6.9	10.0
Nitrate as N	Lin2		55958288		2.65	2.50	6.0	10.0
Orthophosphate as P	Lin2		14343101		2.10	2.50	-15.9*	10.0

FORM VII  
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 180-131352/27 Calibration Date: 01/21/2015 19:38  
 Instrument ID: CHIC2100A Calib Start Date: 01/13/2015 12:24  
 GC Column: AS-18 ID: \_\_\_\_\_ Calib End Date: 01/13/2015 14:11  
 Lab File ID: A-ICS2100 A 01-21-2015-27.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.99	2.64	3.34
Chloride	4.01	3.66	4.36
Nitrite as N	4.72	4.47	4.97
Sulfate	5.50	5.15	5.85
Bromide	6.30	5.95	6.65
Nitrate as N	7.29	7.04	7.54
Orthophosphate as P	10.31	10.06	10.56

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-27.d  
 Lims ID: ccv  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 21-Jan-2015 19:38:00 ALS Bottle#: 0 Worklist Smp#: 27  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-027  
 Misc. Info.: 36 ccv  
 Operator ID: Instrument ID: CHIC2100A  
 Sublist: chrom-300\_9056\_CHIC2100A\*sub3  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:12 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8954981H	2.50	2.84	
2 Chloride	4.008	4.008	0.000	1130573903	50.0	53.0	
7 Nitrite as N	4.717	4.717	0.000	124344584	2.50	2.69	
3 Sulfate	5.500	5.500	0.000	820946488	50.0	53.2	
4 Bromide	6.300	6.300	0.000	103441131	10.0	10.7	
5 Nitrate as N	7.292	7.292	0.000	139895720	2.50	2.65	
6 Orthophosphate as P	10.308	10.308	0.000	35857753	2.50	2.10	

**Reagents:**

icccv\_01146

Amount Added: 1.00

Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-27.d

Injection Date: 21-Jan-2015 19:38:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccv

Worklist Smp#: 27

Client ID:

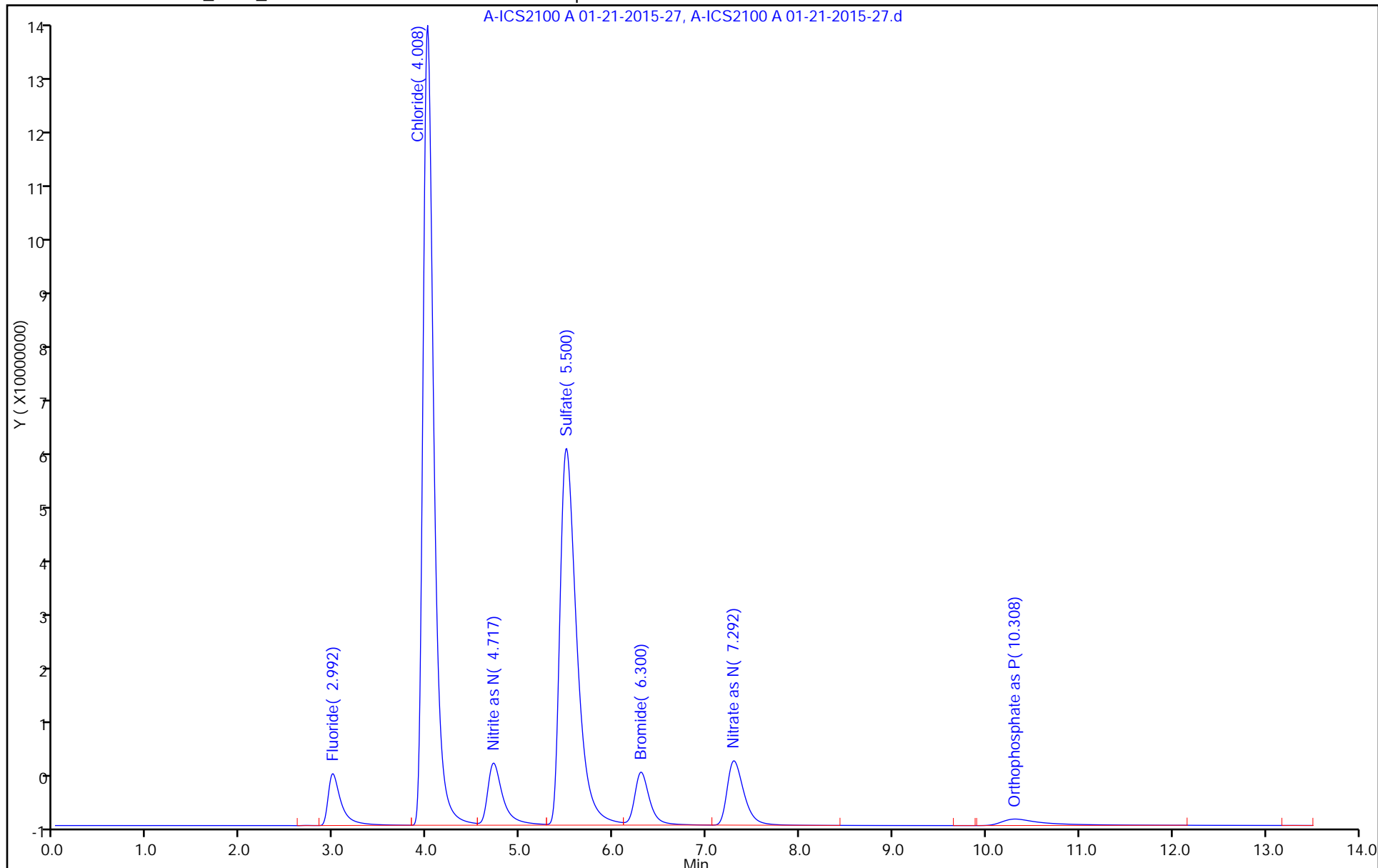
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 180-131352/6  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-6.d  
 Analysis Method: 300.0 Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 12:01  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00966	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21



TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-6.d  
 Lims ID: mb  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 21-Jan-2015 12:01:00 ALS Bottle#: 0 Worklist Smp#: 6  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-006  
 Misc. Info.: 15 mb  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.142	2.992	0.150	3366H		0.0113	
2 Chloride	4.042	4.008	0.034	606250		-0.0435	
7 Nitrite as N	4.767	4.717	0.050	1082439		-0.0232	
3 Sulfate	5.625	5.500	0.125	943755		-0.1095	
4 Bromide		6.300				ND	
5 Nitrate as N	7.400	7.300	0.100	82603		0.009663	
6 Orthophosphate as P	10.483	10.308	0.175	186900		0.0311	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-6.d

Injection Date: 21-Jan-2015 12:01:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: mb

Worklist Smp#: 6

Client ID:

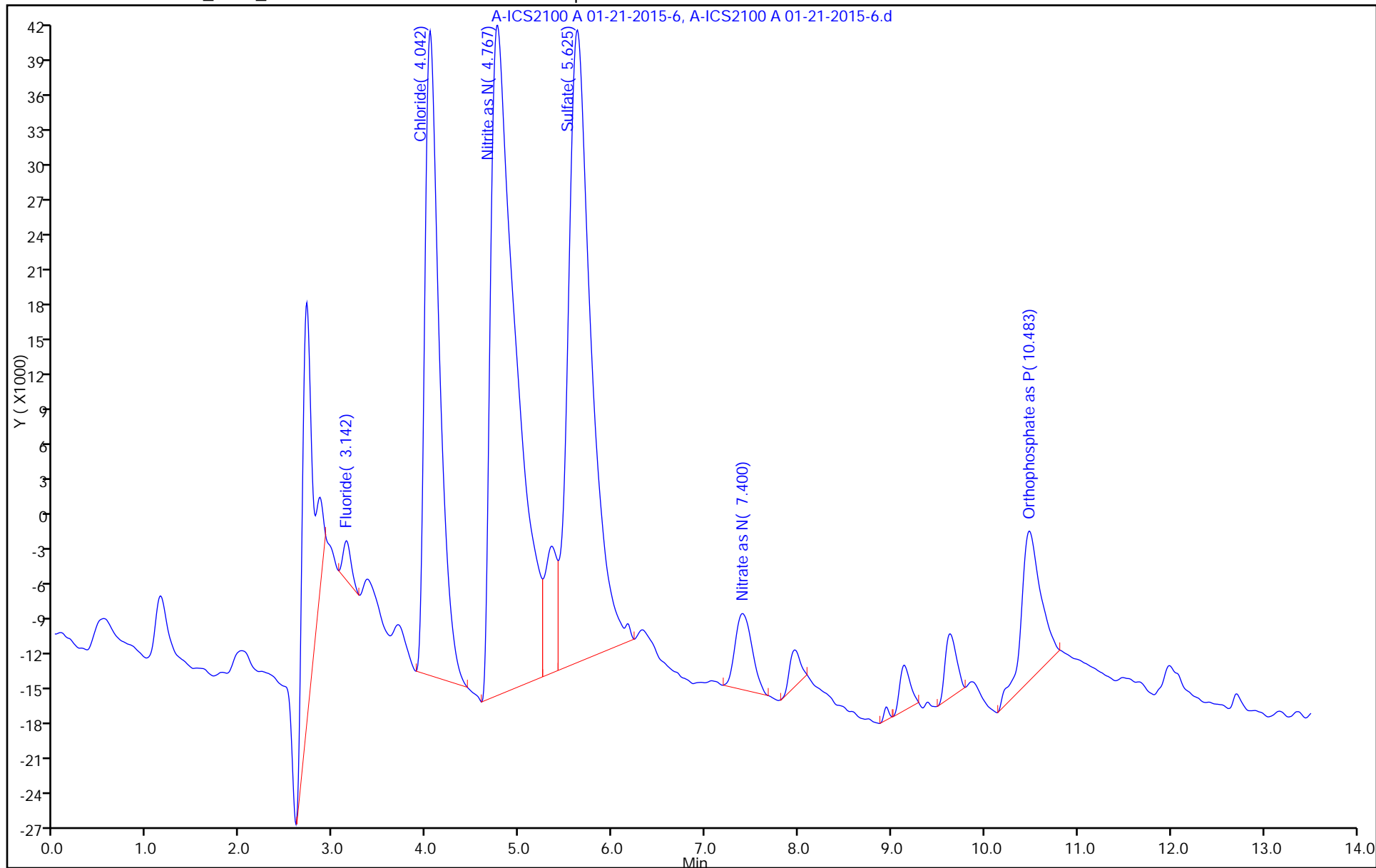
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 180-131352/4  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-4.d  
 Analysis Method: 300.0 Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 11:30  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0102	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-4.d  
 Lims ID: ccb  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 21-Jan-2015 11:30:00 ALS Bottle#: 0 Worklist Smp#: 4  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-004  
 Misc. Info.: 13 ccb  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.867	2.992	-0.125	6682H		0.0123	
2 Chloride	4.042	4.008	0.034	645957		-0.0416	
7 Nitrite as N	4.767	4.717	0.050	1273103		-0.0190	
3 Sulfate	5.625	5.500	0.125	1186935		-0.0937	
4 Bromide	6.408	6.300	0.108	109885		0.0114	
5 Nitrate as N	7.392	7.300	0.092	111268		0.0102	
6 Orthophosphate as P	10.150	10.308	-0.158	47284		0.0230	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-4.d

Injection Date: 21-Jan-2015 11:30:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 4

Client ID:

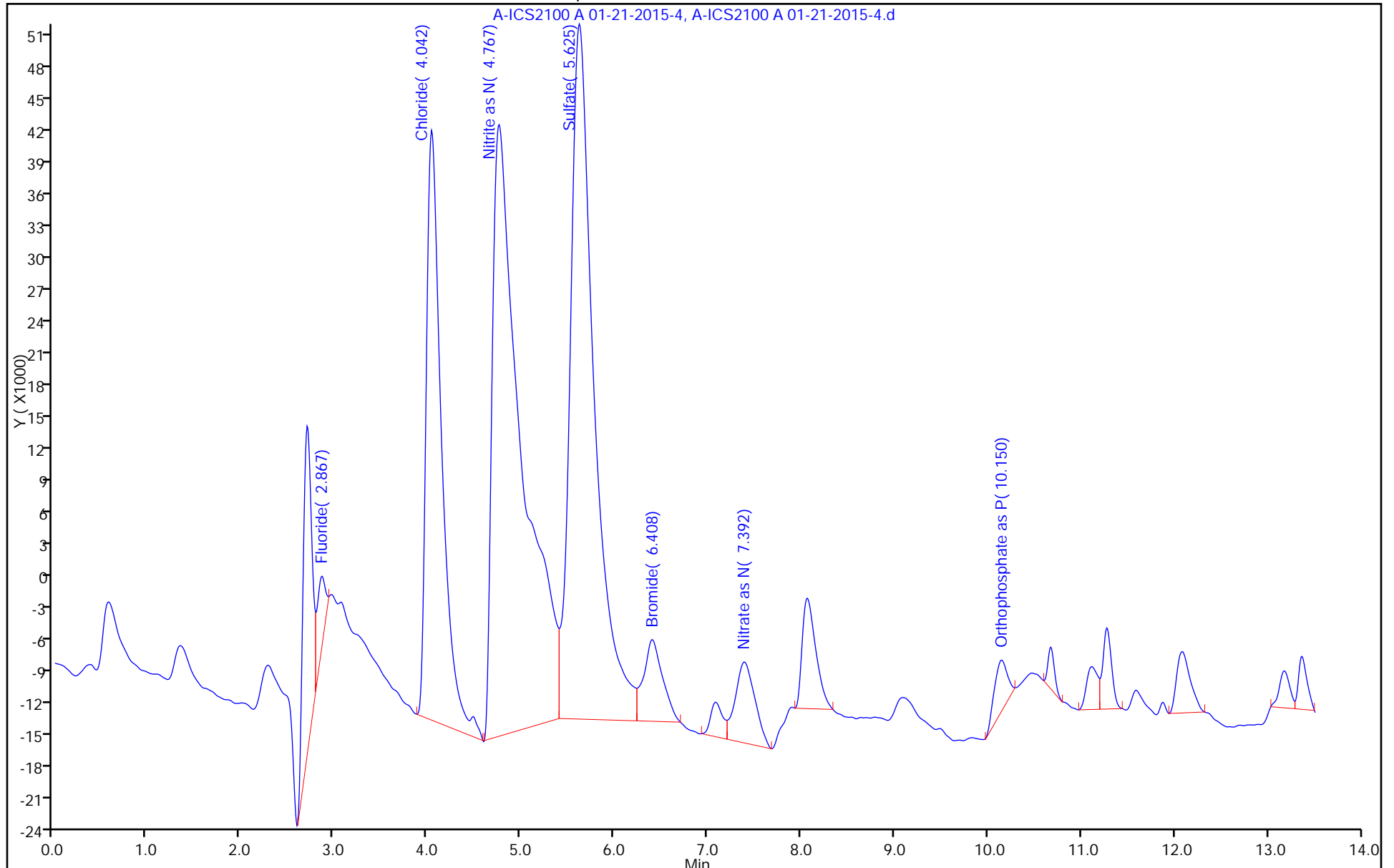
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 180-131352/16  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-16.d  
 Analysis Method: 300.0 Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 16:49  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.0112	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-16.d  
 Lims ID: ccb  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 21-Jan-2015 16:49:00 ALS Bottle#: 0 Worklist Smp#: 16  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-016  
 Misc. Info.: 25 ccb  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:08 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.875	2.992	-0.117	17087H		0.0156	
2 Chloride	4.042	4.008	0.034	1629509		0.004589	
7 Nitrite as N	4.758	4.717	0.041	1094025		-0.0229	
3 Sulfate	5.625	5.492	0.133	729258		-0.1235	
4 Bromide	5.967	6.300	-0.333	101738		0.0105	
5 Nitrate as N	7.375	7.300	0.075	166640		0.0112	
6 Orthophosphate as P	10.433	10.300	0.133	50742		0.0232	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-16.d

Injection Date: 21-Jan-2015 16:49:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 16

Client ID:

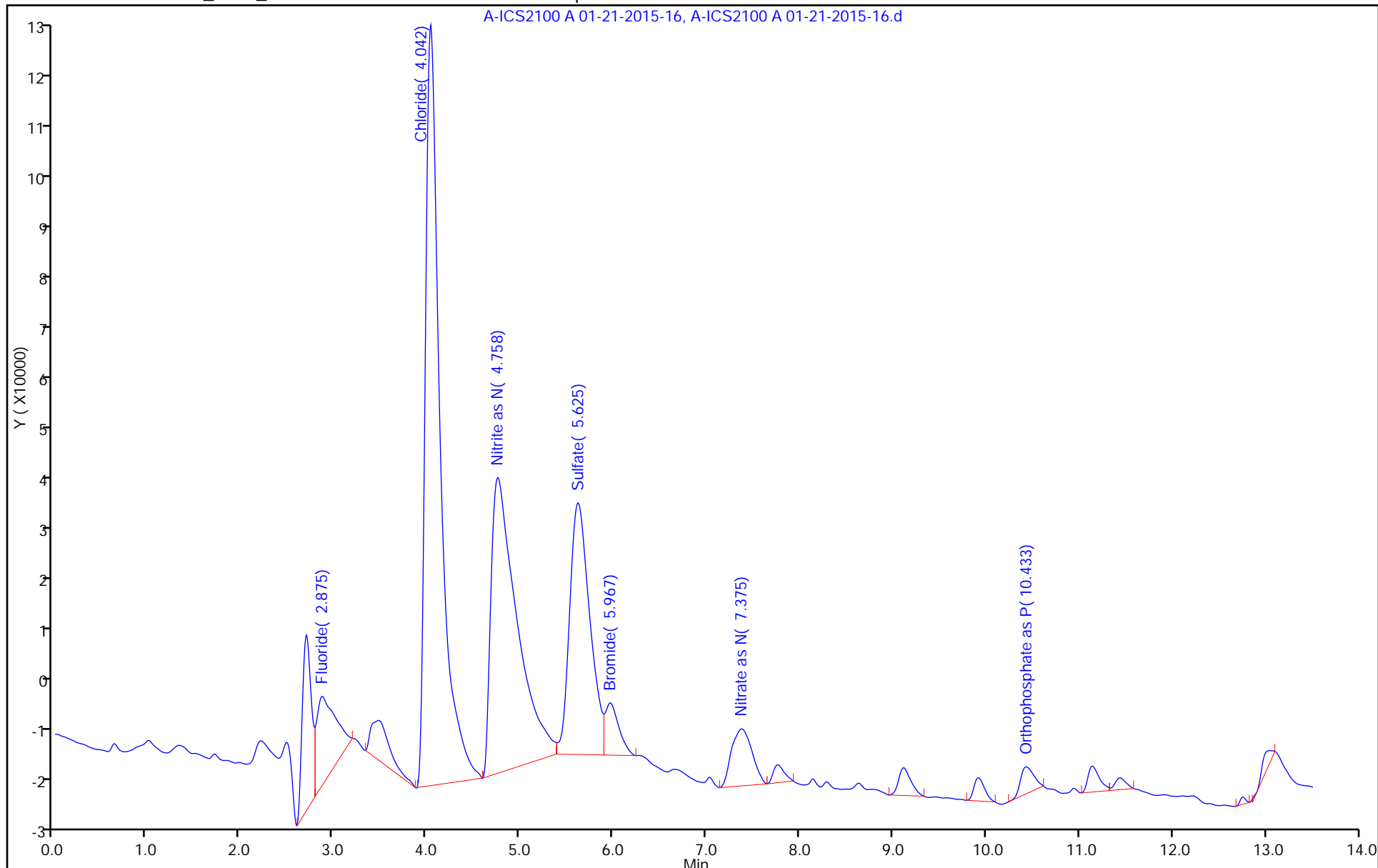
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL





FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: CCB 180-131352/28  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-28.d  
 Analysis Method: 300.0 Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 19:53  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.00893	J	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-28.d  
 Lims ID: ccb  
 Client ID:  
 Sample Type: CCB  
 Inject. Date: 21-Jan-2015 19:53:00 ALS Bottle#: 0 Worklist Smp#: 28  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-028  
 Misc. Info.: 37 ccb  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:12 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.825	2.992	-0.167	142596H		0.0553	
2 Chloride	4.033	4.008	0.025	1432984		-0.004645	
7 Nitrite as N	4.750	4.717	0.033	739513		-0.0307	
3 Sulfate	5.617	5.500	0.117	929029		-0.1105	
4 Bromide		6.300				ND	
5 Nitrate as N	7.383	7.292	0.091	43611		0.008927	
6 Orthophosphate as P	10.300	10.308	-0.008	78694		0.0248	

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-28.d

Injection Date: 21-Jan-2015 19:53:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: ccb

Worklist Smp#: 28

Client ID:

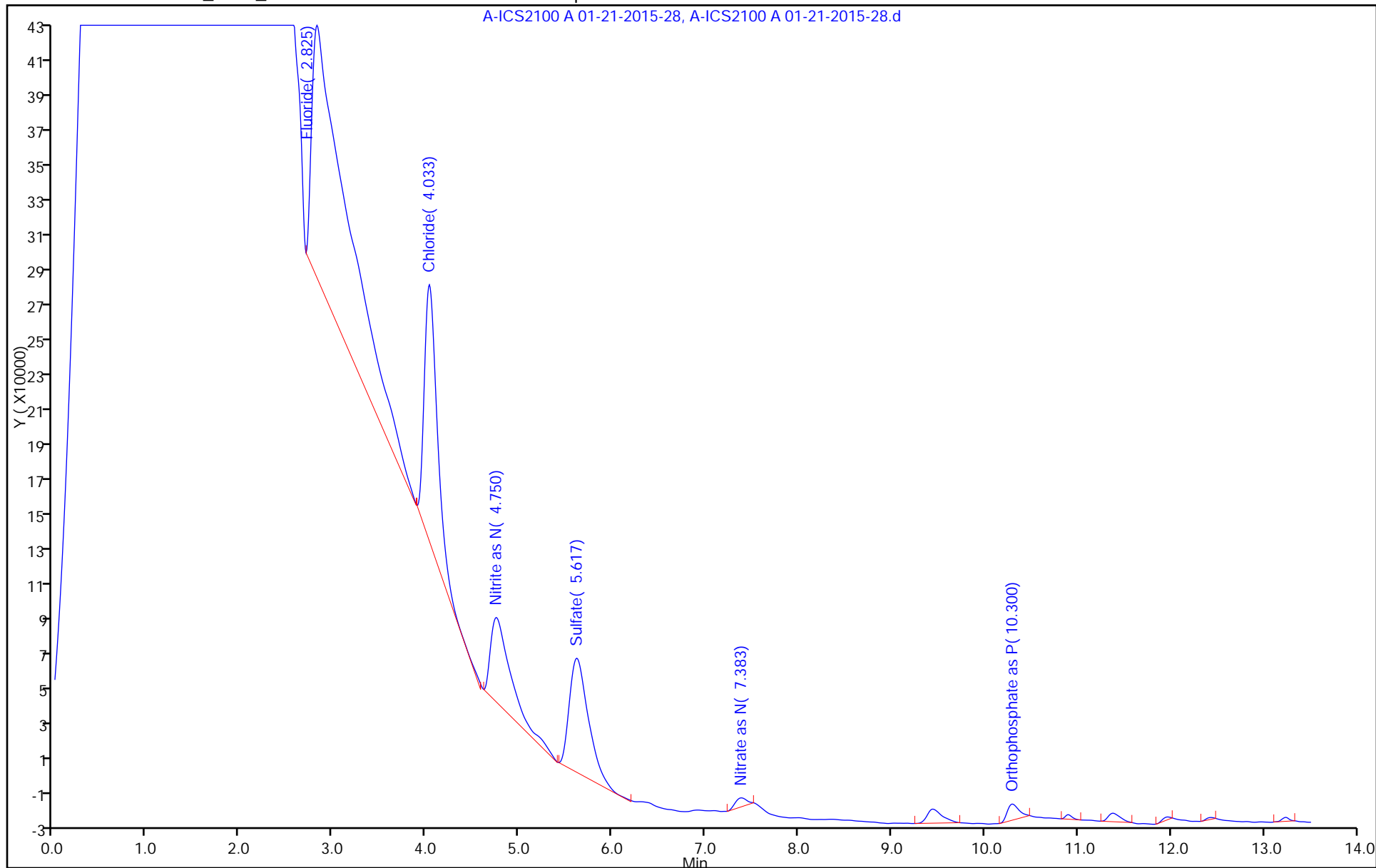
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



FORM I  
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 180-131352/5  
 Matrix: Water Lab File ID: A-ICS2100 A 01-21-2015-5.d  
 Analysis Method: 300.0 Date Collected: \_\_\_\_\_  
 Extraction Method: \_\_\_\_\_ Date Extracted: \_\_\_\_\_  
 Sample wt/vol: 1(mL) Date Analyzed: 01/21/2015 11:46  
 Con. Extract Vol.: \_\_\_\_\_ Dilution Factor: 1  
 Injection Volume: 10(uL) GC Column: AS-18 ID: \_\_\_\_\_  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 131352 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.64		0.10	0.0062
16887-00-6	Chloride	52.8		1.0	0.20
14808-79-8	Sulfate	53.0		1.0	0.21

TestAmerica Pittsburgh  
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-5.d  
 Lims ID: lcs  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 21-Jan-2015 11:46:00 ALS Bottle#: 0 Worklist Smp#: 5  
 Injection Vol: 10.0 ul Dil. Factor: 1.0000  
 Sample Info: 180-0005367-005  
 Misc. Info.: 14 lcs  
 Operator ID: Instrument ID: CHIC2100A  
 Method: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\300\_9056\_CHIC2100A.m  
 Limit Group: GC Anions ICAL  
 Last Update: 22-Jan-2015 10:03:04 Calib Date: 13-Jan-2015 14:11:00  
 Integrator: Falcon  
 Quant Method: External Standard Quant By: Initial Calibration  
 Last ICal File: \\PITCHROM\ChromData\CHIC2100A\20150113-5255.b\A-ICS2100 A 01-13A-2015-9.d  
 Column 1 : Det: 0008  
 Process Host: XAWRK022

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.992	2.992	0.000	8969129H	2.50	2.85	
2 Chloride	4.008	4.008	0.000	1124547018	50.0	52.8	
7 Nitrite as N	4.717	4.717	0.000	123905552	2.50	2.68	
3 Sulfate	5.492	5.500	-0.008	818076589	50.0	53.0	
4 Bromide	6.300	6.300	0.000	102696411	10.0	10.6	
5 Nitrate as N	7.300	7.300	0.000	139202564	2.50	2.64	
6 Orthophosphate as P	10.292	10.308	-0.016	39109294	2.50	2.29	

Reagents:

icccv\_01146 Amount Added: 1.00 Units: mL

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC2100A\20150121-5367.b\A-ICS2100 A 01-21-2015-5.d

Injection Date: 21-Jan-2015 11:46:00

Instrument ID: CHIC2100A

Operator ID:

Lims ID: lcs

Worklist Smp#: 5

Client ID:

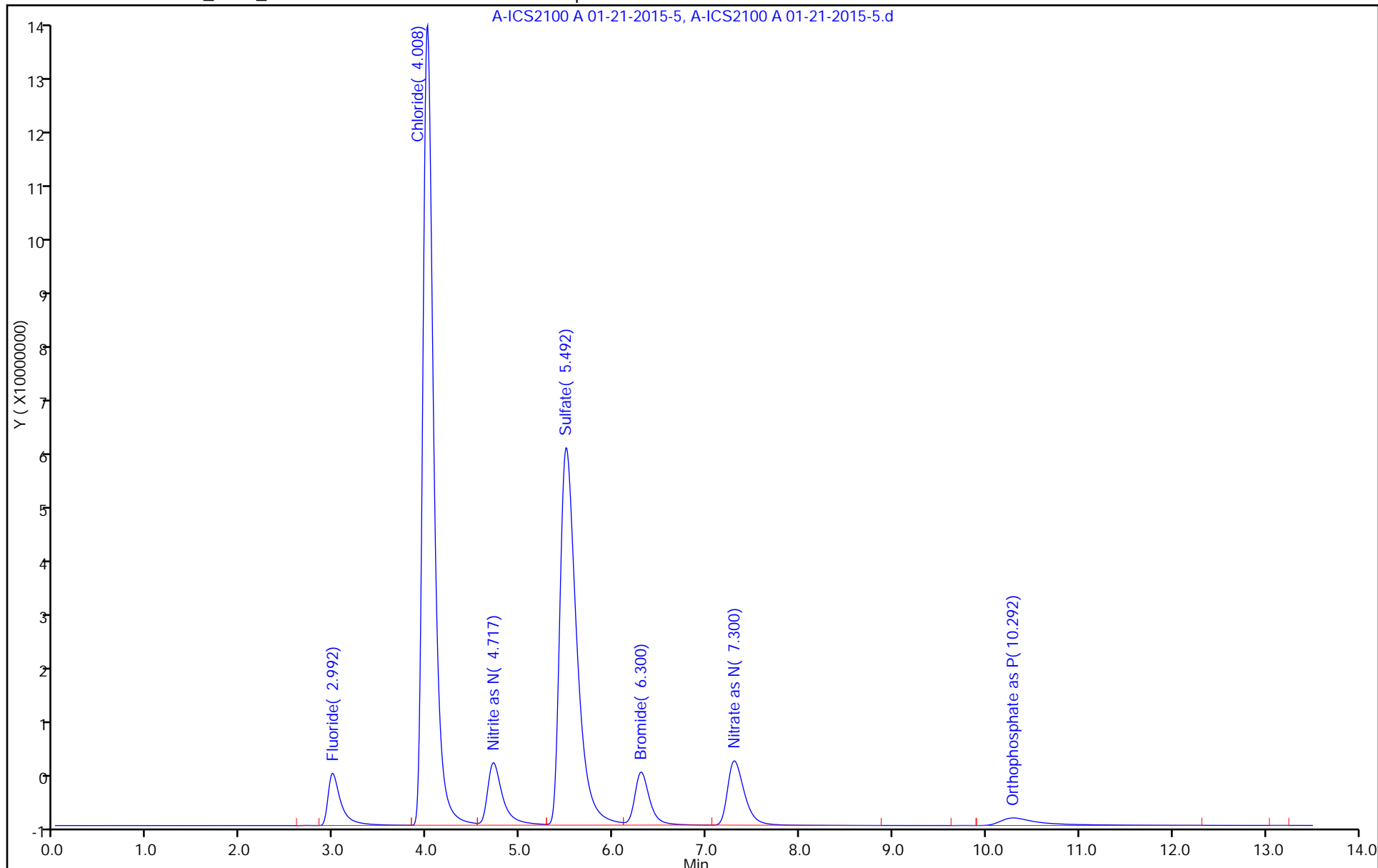
Injection Vol: 10.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 0

Method: 300\_9056\_CHIC2100A

Limit Group: GC Anions ICAL



HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHIC2100A Start Date: 01/13/2015 12:09

Analysis Batch Number: 130629 End Date: 01/13/2015 21:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		01/13/2015 12:09	1		AS-18
IC 180-130629/2		01/13/2015 12:24	1	A-ICS2100 A 01-13A-2015-2.d	AS-18
IC 180-130629/3		01/13/2015 12:39	1	A-ICS2100 A 01-13A-2015-3.d	AS-18
ICRT 180-130629/4		01/13/2015 12:55	1	A-ICS2100 A 01-13A-2015-4.d	AS-18
IC 180-130629/5		01/13/2015 13:10	1	A-ICS2100 A 01-13A-2015-5.d	AS-18
IC 180-130629/6		01/13/2015 13:25	1	A-ICS2100 A 01-13A-2015-6.d	AS-18
IC 180-130629/7		01/13/2015 13:41	1	A-ICS2100 A 01-13A-2015-7.d	AS-18
IC 180-130629/8		01/13/2015 13:56	1	A-ICS2100 A 01-13A-2015-8.d	AS-18
IC 180-130629/9		01/13/2015 14:11	1	A-ICS2100 A 01-13A-2015-9.d	AS-18
ZZZZZ		01/13/2015 14:27	1		AS-18
ZZZZZ		01/13/2015 14:54	1		AS-18
ZZZZZ		01/13/2015 15:09	1		AS-18
ICV 180-130629/13		01/13/2015 15:24	1		AS-18
CCV 180-130629/14		01/13/2015 15:40	1		AS-18
CCB 180-130629/15		01/13/2015 15:55	1		AS-18
ZZZZZ		01/13/2015 16:10	1		AS-18
ZZZZZ		01/13/2015 16:26	1		AS-18
ZZZZZ		01/13/2015 16:43	5		AS-18
ZZZZZ		01/13/2015 16:58	50		AS-18
ZZZZZ		01/13/2015 17:14	10		AS-18
ZZZZZ		01/13/2015 17:29	100		AS-18
ZZZZZ		01/13/2015 17:44	10		AS-18
ZZZZZ		01/13/2015 17:59	100		AS-18
ZZZZZ		01/13/2015 18:15	1		AS-18
ZZZZZ		01/13/2015 18:30	1		AS-18
CCV 180-130629/26		01/13/2015 18:45	1		AS-18
CCB 180-130629/27		01/13/2015 19:01	1		AS-18
ZZZZZ		01/13/2015 19:16	1		AS-18
ZZZZZ		01/13/2015 19:31	25		AS-18
ZZZZZ		01/13/2015 19:47	25		AS-18
ZZZZZ		01/13/2015 20:02	25		AS-18
ZZZZZ		01/13/2015 20:17	25		AS-18
ZZZZZ		01/13/2015 20:32	25		AS-18
ZZZZZ		01/13/2015 20:48	25		AS-18
ZZZZZ		01/13/2015 21:03	100		AS-18
ZZZZZ		01/13/2015 21:18	100		AS-18
CCV 180-130629/37		01/13/2015 21:34	1		AS-18
CCB 180-130629/38		01/13/2015 21:49	1		AS-18

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHIC2100A Start Date: 01/21/2015 10:45

Analysis Batch Number: 131352 End Date: 01/22/2015 00:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		01/21/2015 10:45	1		AS-18
ICV 180-131352/2		01/21/2015 11:00	1	A-ICS2100 A 01-21-2015-2.d	AS-18
CCV 180-131352/3		01/21/2015 11:15	1	A-ICS2100 A 01-21-2015-3.d	AS-18
CCB 180-131352/4		01/21/2015 11:30	1	A-ICS2100 A 01-21-2015-4.d	AS-18
LCS 180-131352/5		01/21/2015 11:46	1	A-ICS2100 A 01-21-2015-5.d	AS-18
MB 180-131352/6		01/21/2015 12:01	1	A-ICS2100 A 01-21-2015-6.d	AS-18
ZZZZZ		01/21/2015 14:32	1		AS-18
ZZZZZ		01/21/2015 14:47	1		AS-18
ZZZZZ		01/21/2015 15:02	1		AS-18
180-40617-1	HD-CW-9-0/1-0	01/21/2015 15:17	1	A-ICS2100 A 01-21-2015-10.d	AS-18
180-40617-1	HD-CW-9-0/1-0	01/21/2015 15:33	5	A-ICS2100 A 01-21-2015-11.d	AS-18
180-40617-2	HD-CW-13-0/1-0	01/21/2015 15:48	1	A-ICS2100 A 01-21-2015-12.d	AS-18
180-40617-2	HD-CW-13-0/1-0	01/21/2015 16:03	5	A-ICS2100 A 01-21-2015-13.d	AS-18
180-40617-3	HD-CW-15A-0/1-0	01/21/2015 16:19	1	A-ICS2100 A 01-21-2015-14.d	AS-18
CCV 180-131352/15		01/21/2015 16:34	1	A-ICS2100 A 01-21-2015-15.d	AS-18
CCB 180-131352/16		01/21/2015 16:49	1	A-ICS2100 A 01-21-2015-16.d	AS-18
180-40617-4	HD-CW-17-0/1-0	01/21/2015 17:05	1	A-ICS2100 A 01-21-2015-17.d	AS-18
ZZZZZ		01/21/2015 17:20	5		AS-18
180-40617-5	HD-CW-20-0/1-0	01/21/2015 17:35	1	A-ICS2100 A 01-21-2015-19.d	AS-18
ZZZZZ		01/21/2015 17:51	5		AS-18
ZZZZZ		01/21/2015 18:06	1		AS-18
ZZZZZ		01/21/2015 18:21	1		AS-18
ZZZZZ		01/21/2015 18:36	1		AS-18
ZZZZZ		01/21/2015 18:52	25		AS-18
ZZZZZ		01/21/2015 19:07	25		AS-18
ZZZZZ		01/21/2015 19:22	25		AS-18
CCV 180-131352/27		01/21/2015 19:38	1	A-ICS2100 A 01-21-2015-27.d	AS-18
CCB 180-131352/28		01/21/2015 19:53	1	A-ICS2100 A 01-21-2015-28.d	AS-18
ZZZZZ		01/21/2015 20:08	25		AS-18
ZZZZZ		01/21/2015 20:24	25		AS-18
ZZZZZ		01/21/2015 20:39	25		AS-18
ZZZZZ		01/21/2015 20:54	25		AS-18
ZZZZZ		01/21/2015 21:09	25		AS-18
ZZZZZ		01/21/2015 21:25	2.5		AS-18
ZZZZZ		01/21/2015 21:40	25		AS-18
ZZZZZ		01/21/2015 21:55	2.5		AS-18
ZZZZZ		01/21/2015 22:11	25		AS-18
ZZZZZ		01/21/2015 22:26	25		AS-18



HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: CHIC2100A Start Date: 01/21/2015 10:45

Analysis Batch Number: 131352 End Date: 01/22/2015 00:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 180-131352/39		01/21/2015 22:41	1		AS-18
CCB 180-131352/40		01/21/2015 22:57	1		AS-18
ZZZZZ		01/21/2015 23:12	2.5		AS-18
ZZZZZ		01/21/2015 23:27	5		AS-18
ZZZZZ		01/21/2015 23:42	50		AS-18
CCV 180-131352/45		01/21/2015 23:58	1		AS-18
CCB 180-131352/46		01/22/2015 00:13	1		AS-18

# METALS

COVER PAGE  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-40617-1

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

Project: Harley Davidson

Client Sample ID	Lab Sample ID
<u>HD-CW-9-0/1-0</u>	<u>180-40617-1</u>
<u>HD-CW-13-0/1-0</u>	<u>180-40617-2</u>
<u>HD-CW-15A-0/1-0</u>	<u>180-40617-3</u>
<u>HD-CW-17-0/1-0</u>	<u>180-40617-4</u>
<u>HD-CW-20-0/1-0</u>	<u>180-40617-5</u>

Comments:

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: HD-CW-9-0/1-0

Lab Sample ID: 180-40617-1

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:25

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	120000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	30000	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	27000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	73000	100	3.8	ug/L		B	1	6020A

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS

Client Sample ID: HD-CW-13-0/1-0

Lab Sample ID: 180-40617-2

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:37

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	150000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	30000	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	25000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	87000	100	3.8	ug/L		B	1	6020A

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS

Client Sample ID: HD-CW-15A-0/1-0

Lab Sample ID: 180-40617-3

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 08:10

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	72000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	8000	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	7400	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	46000	100	3.8	ug/L		B	1	6020A

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: HD-CW-17-0/1-0

Lab Sample ID: 180-40617-4

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:43

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	130000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	13000	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	14000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	65000	100	3.8	ug/L		B	1	6020A

1A-IN  
 INORGANIC ANALYSIS DATA SHEET  
 METALS

Client Sample ID: HD-CW-20-0/1-0

Lab Sample ID: 180-40617-5

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:30

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	96000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6800	100	5.8	ug/L		B	1	6020A
7439-95-4	Magnesium	19000	100	1.2	ug/L		B	1	6020A
7440-23-5	Sodium	51000	100	3.8	ug/L		B	1	6020A



2A-IN  
 CALIBRATION VERIFICATIONS  
 METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICV Source: MICVX\_00028 Concentration Units: ug/L

CCV Source: MCCV1X\_00072

Analyte	ICV 180-132177/5 01/29/2015 15:43				CCV 180-132177/11 01/29/2015 16:09				CCV 180-132177/23 01/29/2015 17:04			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Calcium</b>	38300		40000	96	46900		50000	94	49100		50000	98
<b>Magnesium</b>	38300		40000	96	47100		50000	94	47500		50000	95
<i>Potassium</i>	39100		40000	98	48100		50000	96	50300		50000	101
<i>Sodium</i>	38900		40000	97	47900		50000	96	48200		50000	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Italicized analytes were not requested for this sequence.

2A-IN  
 CALIBRATION VERIFICATIONS  
 METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICV Source: MICVX\_00028 Concentration Units: ug/L

CCV Source: MCCV1X\_00072

Analyte	CCV 180-132177/35 01/29/2015 17:58											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Calcium</b>	48000		50000	96								
<b>Magnesium</b>	46800		50000	94								
<i>Potassium</i>	49700		50000	99								
<i>Sodium</i>	47800		50000	96								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Italicized analytes were not requested for this sequence.

2A-IN  
 CALIBRATION VERIFICATIONS  
 METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICV Source: MICVX\_00028 Concentration Units: ug/L

CCV Source: MCCV1X\_00072

Analyte	ICV 180-132322/5 01/30/2015 11:03				CCV 180-132322/11 01/30/2015 11:32				CCV 180-132322/23 01/30/2015 12:23			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Calcium</b>	39000		40000	98	48500		50000	97	49800		50000	100
<b>Potassium</b>	40500		40000	101	48200		50000	96	49500		50000	99
<b>Sodium</b>	40500		40000	101	48000		50000	96	48400		50000	97
<i>Magnesium</i>	39600		40000	99	46800		50000	94	46700		50000	93

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Italicized analytes were not requested for this sequence.

2A-IN  
 CALIBRATION VERIFICATIONS  
 METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICV Source: MICVX\_00028 Concentration Units: ug/L

CCV Source: MCCV1X\_00072

Analyte	CCV 180-132322/33 01/30/2015 13:18											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
<b>Calcium</b>	49100		50000	98								
<b>Potassium</b>	49200		50000	98								
<b>Sodium</b>	47800		50000	96								
<i>Magnesium</i>	46300		50000	93								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Italicized analytes were not requested for this sequence.

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Method: 6020A Instrument ID: X  
 Lab Sample ID: CRI 180-132177/8 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	93.5	J	94	70-130
Potassium	100	111		111	70-130
Magnesium	100	92.5	J	92	70-130
Sodium	100	101		101	70-130

Lab Sample ID: CRI 180-132177/38 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	104		104	70-130
Magnesium	100	86.3	J	86	70-130

Lab Sample ID: CRI 180-132322/8 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	105		105	70-130
Potassium	100	116		116	70-130
Magnesium	100	92.1	J	92	70-130
Sodium	100	115		115	70-130

Lab Sample ID: CRI 180-132322/32 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00061

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	88.8	J	89	70-130
Potassium	100	81.6	J	82	70-130
Sodium	100	127		127	70-130

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

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Concentration Units: ug/L

Analyte	RL	ICB 180-132177/7 01/29/2015 15:52		CCB1 180-132177/12 01/29/2015 16:17		CCB2 180-132177/24 01/29/2015 17:11		CCB3 180-132177/36 01/29/2015 18:05	
		Found	C	Found	C	Found	C	Found	C
<b>Calcium</b>	100	24.0	J	27.2	J	34.5	J	24.8	J
<b>Magnesium</b>	100	100	U	1.41	J	100	U	100	U
<i>Potassium</i>	100	100	U	9.55	J	100	U	100	U
<i>Sodium</i>	100	6.99	J	26.8	J	100	U	100	U

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Concentration Units: ug/L

Analyte	RL	ICB 180-132322/7 01/30/2015 11:11		CCB1 180-132322/12 01/30/2015 11:36		CCB2 180-132322/24 01/30/2015 12:31		CCB3 180-132322/34 01/30/2015 13:25	
		Found	C	Found	C	Found	C	Found	C
<b>Calcium</b>	100	7.15	J	10.9	J	8.48	J	8.43	J
<b>Potassium</b>	100	24.2	J	60.9	J	13.5	J	44.1	J
<b>Sodium</b>	100	21.0	J	87.0	J	79.8	J	80.3	J
<i>Magnesium</i>	100	2.16	J	7.17	J	6.15	J	6.85	J

Italicized analytes were not requested for this sequence.

3-IN  
METHOD BLANK  
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
SDG No.: \_\_\_\_\_  
Concentration Units: ug/L Lab Sample ID: MB 180-131708/1-A  
Instrument Code: X Batch No.: 132177

CAS No.	Analyte	Concentration	C	Q	Method
7439-95-4	Magnesium	100	U		6020A



3-IN  
METHOD BLANK  
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
SDG No.: \_\_\_\_\_  
Concentration Units: ug/L Lab Sample ID: MB 180-131708/1-A  
Instrument Code: X Batch No.: 132322

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	15.8	J		6020A
7440-09-7	Potassium	42.0	J		6020A
7440-23-5	Sodium	78.3	J		6020A

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICSA 180-132177/9 Instrument ID: X  
 Lab File ID: X50129A.xml ICS Source: MICSAX\_00062  
 Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
<b>Calcium</b>	<b>100000</b>	<b>98410</b>	<b>98</b>
<b>Magnesium</b>	<b>100000</b>	<b>97260</b>	<b>97</b>
<i>Aluminum</i>	<i>100000</i>	<i>97670</i>	<i>98</i>
<i>Antimony</i>		<i>0.0700</i>	
<i>Arsenic</i>		<i>-0.0770</i>	
<i>Barium</i>		<i>0.123</i>	
<i>Beryllium</i>		<i>0.134</i>	
<i>Boron</i>		<i>0.480</i>	
<i>Cadmium</i>		<i>1.74</i>	
<i>Chromium</i>		<i>0.789</i>	
<i>Cobalt</i>		<i>0.113</i>	
<i>Copper</i>		<i>1.90</i>	
<i>Iron</i>	<i>100000</i>	<i>97900</i>	<i>98</i>
<i>Lead</i>		<i>0.209</i>	
<i>Manganese</i>		<i>0.534</i>	
<i>Molybdenum</i>	<i>2000</i>	<i>2157</i>	<i>108</i>
<i>Nickel</i>		<i>-0.354</i>	
<i>Potassium</i>	<i>100000</i>	<i>97670</i>	<i>98</i>
<i>Selenium</i>		<i>0.471</i>	
<i>Silicon</i>		<i>29.1</i>	
<i>Silver</i>		<i>0.0640</i>	
<i>Sodium</i>	<i>100000</i>	<i>98160</i>	<i>98</i>
<i>Strontium</i>		<i>0.635</i>	
<i>Thallium</i>		<i>0.0090</i>	
<i>Tin</i>		<i>0.161</i>	
<i>Titanium</i>	<i>2000</i>	<i>2092</i>	<i>105</i>
<i>Vanadium</i>		<i>-0.232</i>	
<i>Zinc</i>		<i>2.61</i>	

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

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICSAB 180-132177/10 Instrument ID: X  
 Lab File ID: X50129A.xml ICS Source: MICSABX\_00066  
 Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
<b>Calcium</b>	<b>100000</b>	<b>102777</b>	<b>103</b>
<b>Magnesium</b>	<b>100000</b>	<b>101197</b>	<b>101</b>
<i>Aluminum</i>	<i>100000</i>	<i>101607</i>	<i>102</i>
<i>Antimony</i>	<i>20.0</i>	<i>19.7</i>	<i>98</i>
<i>Arsenic</i>	<i>20.0</i>	<i>21.4</i>	<i>107</i>
<i>Barium</i>	<i>20.0</i>	<i>20.1</i>	<i>100</i>
<i>Beryllium</i>	<i>20.0</i>	<i>19.5</i>	<i>97</i>
<i>Boron</i>	<i>50.0</i>	<i>50.6</i>	<i>101</i>
<i>Cadmium</i>	<i>20.0</i>	<i>21.8</i>	<i>109</i>
<i>Chromium</i>	<i>20.0</i>	<i>20.8</i>	<i>104</i>
<i>Cobalt</i>	<i>20.0</i>	<i>20.6</i>	<i>103</i>
<i>Copper</i>	<i>20.0</i>	<i>22.3</i>	<i>112</i>
<i>Iron</i>	<i>100000</i>	<i>102997</i>	<i>103</i>
<i>Lead</i>	<i>20.0</i>	<i>19.8</i>	<i>99</i>
<i>Manganese</i>	<i>22.5</i>	<i>18.9</i>	<i>84</i>
<i>Molybdenum</i>	<i>2000</i>	<i>2281</i>	<i>114</i>
<i>Nickel</i>	<i>20.0</i>	<i>20.2</i>	<i>101</i>
<i>Potassium</i>	<i>100000</i>	<i>102133</i>	<i>102</i>
<i>Selenium</i>	<i>50.0</i>	<i>52.3</i>	<i>105</i>
<i>Silicon</i>	<i>500</i>	<i>527</i>	<i>105</i>
<i>Silver</i>	<i>20.0</i>	<i>19.8</i>	<i>99</i>
<i>Sodium</i>	<i>100000</i>	<i>101767</i>	<i>102</i>
<i>Strontium</i>	<i>25.0</i>	<i>20.2</i>	<i>81</i>
<i>Thallium</i>	<i>20.0</i>	<i>18.7</i>	<i>93</i>
<i>Tin</i>	<i>100</i>	<i>99.3</i>	<i>99</i>
<i>Titanium</i>	<i>2000</i>	<i>2181</i>	<i>109</i>
<i>Vanadium</i>	<i>20.0</i>	<i>19.1</i>	<i>96</i>
<i>Zinc</i>	<i>25.0</i>	<i>22.6</i>	<i>90</i>

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

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICSA 180-132322/9 Instrument ID: X  
 Lab File ID: X50130A.xml ICS Source: MICSAX\_00062  
 Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution A	Solution A	
<b>Calcium</b>	<b>100000</b>	<b>99960</b>	<b>100</b>
<b>Potassium</b>	<b>100000</b>	<b>98280</b>	<b>98</b>
<b>Sodium</b>	<b>100000</b>	<b>99370</b>	<b>99</b>
<i>Aluminum</i>	<i>100000</i>	<i>98650</i>	<i>99</i>
<i>Antimony</i>		<i>-0.233</i>	
<i>Arsenic</i>		<i>-0.0010</i>	
<i>Barium</i>		<i>0.107</i>	
<i>Beryllium</i>		<i>-0.0200</i>	
<i>Boron</i>		<i>0.739</i>	
<i>Cadmium</i>		<i>2.48</i>	
<i>Chromium</i>		<i>0.558</i>	
<i>Cobalt</i>		<i>0.118</i>	
<i>Copper</i>		<i>2.10</i>	
<i>Iron</i>	<i>100000</i>	<i>98940</i>	<i>99</i>
<i>Lead</i>		<i>0.233</i>	
<i>Magnesium</i>	<i>100000</i>	<i>97170</i>	<i>97</i>
<i>Manganese</i>		<i>0.677</i>	
<i>Molybdenum</i>	<i>2000</i>	<i>2269</i>	<i>113</i>
<i>Nickel</i>		<i>-0.450</i>	
<i>Selenium</i>		<i>0.450</i>	
<i>Silicon</i>		<i>41.5</i>	
<i>Silver</i>		<i>0.0990</i>	
<i>Strontium</i>		<i>0.631</i>	
<i>Thallium</i>		<i>0.0100</i>	
<i>Tin</i>		<i>-0.874</i>	
<i>Titanium</i>	<i>2000</i>	<i>2128</i>	<i>106</i>
<i>Vanadium</i>		<i>-0.171</i>	
<i>Zinc</i>		<i>3.18</i>	

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

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICSAB 180-132322/10 Instrument ID: X  
 Lab File ID: X50130A.xml ICS Source: MICSABX\_00066  
 Concentration Units: ug/L

Analyte	True	Found	Percent Recovery
	Solution AB	Solution AB	
<b>Calcium</b>	<b>100000</b>	<b>98963</b>	<b>99</b>
<b>Potassium</b>	<b>100000</b>	<b>96720</b>	<b>97</b>
<b>Sodium</b>	<b>100000</b>	<b>96173</b>	<b>96</b>
<i>Aluminum</i>	<i>100000</i>	<i>95120</i>	<i>95</i>
<i>Antimony</i>	<i>20.0</i>	<i>18.7</i>	<i>94</i>
<i>Arsenic</i>	<i>20.0</i>	<i>20.6</i>	<i>103</i>
<i>Barium</i>	<i>20.0</i>	<i>18.9</i>	<i>95</i>
<i>Beryllium</i>	<i>20.0</i>	<i>18.9</i>	<i>95</i>
<i>Boron</i>	<i>50.0</i>	<i>48.1</i>	<i>96</i>
<i>Cadmium</i>	<i>20.0</i>	<i>21.6</i>	<i>108</i>
<i>Chromium</i>	<i>20.0</i>	<i>19.2</i>	<i>96</i>
<i>Cobalt</i>	<i>20.0</i>	<i>19.2</i>	<i>96</i>
<i>Copper</i>	<i>20.0</i>	<i>21.5</i>	<i>107</i>
<i>Iron</i>	<i>100000</i>	<i>97890</i>	<i>98</i>
<i>Lead</i>	<i>20.0</i>	<i>20.3</i>	<i>101</i>
<i>Magnesium</i>	<i>100000</i>	<i>94153</i>	<i>94</i>
<i>Manganese</i>	<i>22.5</i>	<i>18.9</i>	<i>84</i>
<i>Molybdenum</i>	<i>2000</i>	<i>2328</i>	<i>116</i>
<i>Nickel</i>	<i>20.0</i>	<i>18.4</i>	<i>92</i>
<i>Selenium</i>	<i>50.0</i>	<i>54.5</i>	<i>109</i>
<i>Silicon</i>	<i>500</i>	<i>460</i>	<i>92</i>
<i>Silver</i>	<i>20.0</i>	<i>18.9</i>	<i>94</i>
<i>Strontium</i>	<i>25.0</i>	<i>20.5</i>	<i>82</i>
<i>Thallium</i>	<i>20.0</i>	<i>19.0</i>	<i>95</i>
<i>Tin</i>	<i>100</i>	<i>94.7</i>	<i>95</i>
<i>Titanium</i>	<i>2000</i>	<i>2073</i>	<i>104</i>
<i>Vanadium</i>	<i>20.0</i>	<i>18.0</i>	<i>90</i>
<i>Zinc</i>	<i>25.0</i>	<i>22.8</i>	<i>91</i>

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

7A-IN  
 LAB CONTROL SAMPLE  
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 180-131708/2-A

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

Sample Matrix: Water

LCS Source: MTAPITMSA\_00023

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	47900		96	80	120	B	6020A
Magnesium	50000	45400		91	80	120	B	6020A

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

FORM VIIA - IN

7A-IN  
 LAB CONTROL SAMPLE  
 METALS - TOTAL RECOVERABLE

Lab ID: LCS 180-131708/2-A

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

Sample Matrix: Water

LCS Source: MTAPITMSA\_00023

Analyte	Water (ug/L)							
	True	Found	C	%R	Limits		Q	Method
Potassium	50000	46700		93	80	120		6020A
Sodium	50000	42700		85	80	120		6020A

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

FORM VIIA - IN

9-IN  
DETECTION LIMITS  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-40617-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: X  
Method: 6020A MDL Date: 01/23/2010 18:33  
Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135



9-IN  
CALIBRATION BLANK DETECTION LIMITS  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-40617-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: X  
Method: 6020A XMDL Date: 01/23/2010 18:33

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135

11-IN  
LINEAR RANGES  
METALS

Lab Name: TestAmerica Pittsburgh

Job No: 180-40617-1

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

Instrument ID: X

Date: 03/14/2011 22:35

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		1500000	6020A
Potassium		450000	6020A
Magnesium		1500000	6020A
Sodium		450000	6020A

12-IN  
PREPARATION LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 180-131708/1-A	01/26/2015 09:18	131708		50	50
LCS 180-131708/2-A	01/26/2015 09:18	131708		50	50
180-40617-1	01/26/2015 09:18	131708		50	50
180-40617-2	01/26/2015 09:18	131708		50	50
180-40617-3	01/26/2015 09:18	131708		50	50
180-40617-4	01/26/2015 09:18	131708		50	50
180-40617-5	01/26/2015 09:18	131708		50	50

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: X Analysis Method: 6020A

Start Date: 01/29/2015 11:04 End Date: 01/29/2015 22:09

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	M																										
ITUNE 180-132177/1			11:04																												
STD1 180-132177/2 IC	1		15:31	X	X																										
STD2 180-132177/3 IC	1		15:35	X	X																										
STD3 180-132177/4 IC	1		15:39	X	X																										
ICV 180-132177/5	1		15:43	X	X																										
ICV 180-132177/6			15:48																												
ICB 180-132177/7	1		15:52	X	X																										
CRI 180-132177/8	1		15:56	X	X																										
ICSA 180-132177/9	1		16:01	X	X																										
ICSAB 180-132177/10	1		16:05	X	X																										
CCV 180-132177/11	1		16:09	X	X																										
CCB1 180-132177/12	1		16:17	X	X																										
MB 180-131708/1-A	1	R	16:21		X																										
ZZZZZZ			16:25																												
LCS 180-131708/2-A	1	R	16:30	X	X																										
180-40617-1	1	T	16:34	X	X																										
180-40617-2	1	T	16:38	X	X																										
180-40617-3	1	T	16:42	X	X																										
180-40617-4	1	T	16:46	X	X																										
180-40617-5	1	T	16:51	X	X																										
ZZZZZZ			16:55																												
ZZZZZZ			16:59																												
CCV 180-132177/23	1		17:04	X	X																										
CCB2 180-132177/24	1		17:11	X	X																										
ZZZZZZ			17:15																												
ZZZZZZ			17:20																												
ZZZZZZ			17:24																												
ZZZZZZ			17:28																												
ZZZZZZ			17:32																												
ZZZZZZ			17:36																												
ZZZZZZ			17:41																												
ZZZZZZ			17:45																												
ZZZZZZ			17:49																												
ZZZZZZ			17:54																												
CCV 180-132177/35	1		17:58	X	X																										
CCB3 180-132177/36	1		18:05	X	X																										
ZZZZZZ			18:09																												
CRI 180-132177/38	1		18:17	X	X																										
ZZZZZZ			18:26																												
ZZZZZZ			18:30																												
ZZZZZZ			18:34																												
ZZZZZZ			18:38																												

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: X Analysis Method: 6020A

Start Date: 01/29/2015 11:04 End Date: 01/29/2015 22:09

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	M																										
ZZZZZZ			18:43																												
ZZZZZZ			18:47																												
ZZZZZZ			18:51																												
CCV 180-132177/46			18:55																												
CCB4 180-132177/47			19:03																												
ZZZZZZ			19:07																												
ZZZZZZ			19:11																												
ZZZZZZ			19:19																												
ZZZZZZ			19:23																												
ZZZZZZ			19:27																												
ZZZZZZ			19:32																												
ZZZZZZ			19:36																												
ZZZZZZ			19:43																												
ZZZZZZ			19:48																												
ZZZZZZ			19:52																												
CCV 180-132177/58			19:56																												
CCB5 180-132177/59			20:04																												
ZZZZZZ			20:08																												
ZZZZZZ			20:12																												
ZZZZZZ			20:17																												
ZZZZZZ			20:21																												
ZZZZZZ			20:25																												
ZZZZZZ			20:29																												
ZZZZZZ			20:34																												
ZZZZZZ			20:41																												
ZZZZZZ			20:46																												
ZZZZZZ			20:50																												
CCV 180-132177/70			20:54																												
CCB6 180-132177/71			21:02																												
ZZZZZZ			21:06																												
ZZZZZZ			21:10																												
ZZZZZZ			21:14																												
ZZZZZZ			21:19																												
ZZZZZZ			21:23																												
ZZZZZZ			21:27																												
ZZZZZZ			21:31																												
ZZZZZZ			21:36																												
ZZZZZZ			21:40																												
ZZZZZZ			21:44																												
CCV 180-132177/82			21:49																												
CCB7 180-132177/83			21:56																												
ZZZZZZ			22:00																												

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: X Analysis Method: 6020A

Start Date: 01/29/2015 11:04 End Date: 01/29/2015 22:09

Lab Sample Id	D/F	T y p e	Time	Analytes																											
				C	M																										
CCV 180-132177/85			22:05																												
CCB8 180-132177/86			22:09																												

Prep Types:  
 R = Total Recoverable  
 T = Total/NA

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: X Analysis Method: 6020A

Start Date: 01/30/2015 09:22 End Date: 01/30/2015 13:57

Lab Sample Id	D/F	Type	Time	Analytes																											
				C	K	N																									
ITUNE 180-132322/1			09:22																												
STD1 180-132322/2 IC	1		10:51	X	X	X																									
STD2 180-132322/3 IC	1		10:54	X	X	X																									
STD3 180-132322/4 IC	1		10:58	X	X	X																									
ICV 180-132322/5	1		11:03	X	X	X																									
ICV 180-132322/6	1		11:07																												
ICB 180-132322/7	1		11:11	X	X	X																									
CRI 180-132322/8	1		11:16	X	X	X																									
ICSA 180-132322/9	1		11:20	X	X	X																									
ICSAB 180-132322/10	1		11:24	X	X	X																									
CCV 180-132322/11	1		11:32	X	X	X																									
CCB1 180-132322/12	1		11:36	X	X	X																									
MB 180-131708/1-A	1	R	11:40	X	X	X																									
ZZZZZZ			11:44																												
LCS 180-131708/2-A	1	R	11:49		X	X																									
180-40617-1	1	T	11:53		X	X																									
180-40617-2	1	T	11:57		X	X																									
180-40617-3	1	T	12:01		X	X																									
180-40617-4	1	T	12:05		X	X																									
180-40617-5	1	T	12:10		X	X																									
ZZZZZZ			12:14																												
ZZZZZZ			12:19																												
CCV 180-132322/23	1		12:23	X	X	X																									
CCB2 180-132322/24	1		12:31	X	X	X																									
ZZZZZZ			12:36																												
ZZZZZZ			12:40																												
ZZZZZZ			12:44																												
ZZZZZZ			12:48																												
ZZZZZZ			12:53																												
ZZZZZZ			12:57																												
ZZZZZZ			13:01																												
CRI 180-132322/32	1		13:14	X	X	X																									
CCV 180-132322/33	1		13:18	X	X	X																									
CCB3 180-132322/34	1		13:25	X	X	X																									
ZZZZZZ			13:30																												
ZZZZZZ			13:34																												
ZZZZZZ			13:38																												
ZZZZZZ			13:42																												
CCV 180-132322/39			13:50																												
CCB4 180-132322/40			13:57																												

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: X Analysis Method: 6020A

Start Date: 01/30/2015 09:22 End Date: 01/30/2015 13:57

Lab Sample Id	D/F	T y p e	Time	Analytes																												
				C a	K	N a																										

Prep Types:  
 R = Total Recoverable  
 T = Total/NA



15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICP-MS Instrument ID: X Start Date: 01/29/2015 End Date: 01/29/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc	Q	Element Y-89	Q	Element Rh-103	Q	Element In	Q
STD1 180-132177/2 IC	15:31	100		100		100		100		100	
STD2 180-132177/3 IC	15:35	86		90		89		92		88	
STD3 180-132177/4 IC	15:39	92		93		92		92		92	
ICV 180-132177/5	15:43	89		91		88		91		88	
ICB 180-132177/7	15:52	94		96		97		97		97	
CRI 180-132177/8	15:56	92		93		92		92		91	
ICSA 180-132177/9	16:01	82		83		84		84		83	
ICSAB 180-132177/10	16:05	79		81		80		82		83	
CCV 180-132177/11	16:09	85		90		86		89		84	
CCB1 180-132177/12	16:17	91		93		92		95		91	
MB 180-131708/1-A	16:21	91		93		99		95		93	
LCS 180-131708/2-A	16:30	84		74		73		75		72	
180-40617-1	16:34	86		73		73		73		72	
180-40617-2	16:38	85		72		72		73		72	
180-40617-3	16:42	85		73		73		75		73	
180-40617-4	16:46	84		70		72		73		71	
180-40617-5	16:51	82		70		71		72		71	
CCV 180-132177/23	17:04	79		74		74		78		76	
CCB2 180-132177/24	17:11	81		77		77		81		79	
CCV 180-132177/35	17:58	72		68	*	70		70		70	
CCB3 180-132177/36	18:05	76		69	*	70		73		71	
CRI 180-132177/38	18:17	77		71		69	*	74		72	

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICP-MS Instrument ID: X Start Date: 01/29/2015 End Date: 01/29/2015

Lab Sample ID	Time	Internal Standards %RI For:											
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q		
STD1 180-132177/2 IC	15:31	100		100		100							
STD2 180-132177/3 IC	15:35	92		93		94							
STD3 180-132177/4 IC	15:39	93		94		93							
ICV 180-132177/5	15:43	90		91		92							
ICB 180-132177/7	15:52	99		99		105							
CRI 180-132177/8	15:56	93		94		97							
ICSA 180-132177/9	16:01	87		89		94							
ICSAB 180-132177/10	16:05	87		89		87							
CCV 180-132177/11	16:09	90		90		84							
CCB1 180-132177/12	16:17	93		93		94							
MB 180-131708/1-A	16:21	93		94		96							
LCS 180-131708/2-A	16:30	78		78		76							
180-40617-1	16:34	78		79		74							
180-40617-2	16:38	79		80		77							
180-40617-3	16:42	80		80		79							
180-40617-4	16:46	79		79		76							
180-40617-5	16:51	78		78		77							
CCV 180-132177/23	17:04	83		83		77							
CCB2 180-132177/24	17:11	82		83		85							
CCV 180-132177/35	17:58	77		77		73							
CCB3 180-132177/36	18:05	76		77		79							
CRI 180-132177/38	18:17	80		79		80							

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICP-MS Instrument ID: X Start Date: 01/30/2015 End Date: 01/30/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc	Q	Element Y-89	Q	Element Rh-103	Q	Element In	Q
STD1 180-132322/2 IC	10:51	100		100		100		100		100	
STD2 180-132322/3 IC	10:54	72		81		82		79		81	
STD3 180-132322/4 IC	10:58	77		84		85		86		86	
ICV 180-132322/5	11:03	71		82		84		82		83	
ICV 180-132322/6	11:07	81		87		88		87		88	
ICB 180-132322/7	11:11	82		89		90		90		90	
CRI 180-132322/8	11:16	87		93		93		92		92	
ICSA 180-132322/9	11:20	70		77		80		75		78	
ICSAB 180-132322/10	11:24	73		81		77		78		82	
CCV 180-132322/11	11:32	82		90		90		86		89	
CCB1 180-132322/12	11:36	87		94		94		93		95	
MB 180-131708/1-A	11:40	91		96		96		95		95	
LCS 180-131708/2-A	11:49	99		87		84		80		81	
180-40617-1	11:53	97		84		84		78		82	
180-40617-2	11:57	92		82		82		78		80	
180-40617-3	12:01	91		81		82		79		80	
180-40617-4	12:05	88		79		82		76		80	
180-40617-5	12:10	87		78		81		76		79	
CCV 180-132322/23	12:23	60		63		69		69		71	
CCB2 180-132322/24	12:31	82		79		82		79		80	
CRI 180-132322/32	13:14	83		74		73		75		76	
CCV 180-132322/33	13:18	62		66		71		70		73	
CCB3 180-132322/34	13:25	69		72		77		79		80	

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

ICP-MS Instrument ID: X Start Date: 01/30/2015 End Date: 01/30/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-132322/2 IC	10:51	100		100		100					
STD2 180-132322/3 IC	10:54	83		83		85					
STD3 180-132322/4 IC	10:58	86		86		84					
ICV 180-132322/5	11:03	85		85		83					
ICV 180-132322/6	11:07	88		87		83					
ICB 180-132322/7	11:11	90		89		89					
CRI 180-132322/8	11:16	92		91		92					
ICSA 180-132322/9	11:20	83		84		86					
ICSAB 180-132322/10	11:24	88		88		84					
CCV 180-132322/11	11:32	92		92		85					
CCB1 180-132322/12	11:36	93		94		91					
MB 180-131708/1-A	11:40	95		95		93					
LCS 180-131708/2-A	11:49	87		88		81					
180-40617-1	11:53	88		88		80					
180-40617-2	11:57	88		88		82					
180-40617-3	12:01	88		88		83					
180-40617-4	12:05	87		88		80					
180-40617-5	12:10	88		88		82					
CCV 180-132322/23	12:23	79		79		79					
CCB2 180-132322/24	12:31	84		84		87					
CRI 180-132322/32	13:14	83		83		86					
CCV 180-132322/33	13:18	81		81		82					
CCB3 180-132322/34	13:25	85		85		89					

## Dilution Corrected Concentrations

STD1 1456094 1/29/2015 3:31:43 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:10	96.978%	-0.006	0.052	0.128	0.000	2.501	0.319	-0.081
2	15:32:36	101.208%	-0.006	-0.187	0.081	0.000	-0.599	-1.205	-0.333
3	15:33:03	101.814%	0.011	0.134	-0.209	0.000	-1.903	0.886	0.414
X		100.000%	-0.000	0.000	0.000	0.000	-0.000	-0.000	-0.000
σ		2.635%	0.010	0.167	0.182	0.000	2.262	1.081	0.380
%RSD		2.635	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:10	-0.010	-0.778	0.000	2.575	-0.939	1.447	98.392%	0.075
2	15:32:36	0.106	-0.304	0.000	-0.018	-6.964	-0.164	100.241%	-0.022
3	15:33:03	-0.096	1.082	0.000	-2.557	7.904	-1.283	101.367%	-0.053
X		-0.000	-0.000	0.000	0.000	0.000	-0.000	100.000%	-0.000
σ		0.102	0.967	0.000	2.566	7.478	1.373	1.502%	0.067
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	1.502	0.000
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:10	-0.026	0.010	0.012	0.238	1.149	-0.000	-0.079	0.014
2	15:32:36	-0.002	-0.027	-0.013	0.730	0.242	0.009	0.028	-0.010
3	15:33:03	0.029	0.018	0.000	-0.968	-1.390	-0.009	0.051	-0.004
X		0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	0.000
σ		0.028	0.024	0.012	0.874	1.287	0.009	0.069	0.012
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:10	-0.006	0.018	0.005	-0.095	0.432	-0.365	0.000	-0.002
2	15:32:36	0.017	-0.014	0.012	-0.092	-0.514	-0.548	0.000	0.003
3	15:33:03	-0.011	-0.004	-0.017	0.187	0.082	0.913	0.000	-0.002
X		-0.000	0.000	0.000	0.000	-0.000	0.000	0.000	-0.000
σ		0.015	0.017	0.015	0.162	0.479	0.796	0.000	0.003
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:10	97.021%	-0.088	-0.016	98.645%	-0.000	-0.005	0.004	-2.329
2	15:32:36	99.877%	0.128	0.010	99.834%	-0.004	0.007	-0.002	4.663
3	15:33:03	103.102%	-0.041	0.006	101.521%	0.004	-0.002	-0.002	-2.334
X		100.000%	0.000	-0.000	100.000%	-0.000	0.000	0.000	0.000
σ		3.043%	0.114	0.014	1.445%	0.004	0.006	0.003	4.038
%RSD		3.043	0.000	0.000	1.445	0.000	0.000	0.000	0.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:10	98.020%	-0.007	-0.008	0.002	-0.015	-0.002	97.710%	98.199%
2	15:32:36	100.056%	-0.013	0.006	0.008	0.031	0.008	99.657%	100.395%
3	15:33:03	101.924%	0.020	0.001	-0.010	-0.016	-0.006	102.633%	101.406%
X		100.000%	0.000	0.000	-0.000	0.000	0.000	100.000%	100.000%
σ		1.953%	0.018	0.007	0.009	0.027	0.007	2.479%	1.639%
%RSD		1.953	0.000	0.000	0.000	0.000	0.000	2.479	1.639
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:32:10	-0.001	-0.002	0.003	-0.001	-0.002	97.934%		
2	15:32:36	0.001	-0.000	0.002	-0.004	0.001	100.030%		
3	15:33:03	-0.001	0.002	-0.005	0.004	0.001	102.036%		
X		-0.000	-0.000	-0.000	-0.000	-0.000	100.000%		
σ		0.001	0.002	0.004	0.004	0.002	2.051%		
%RSD		0.000	0.000	0.000	0.000	0.000	2.051		

STD2 1467881 1/29/2015 3:35:23 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:50	85.202%	195.200	0.255	0.015	0.000	99360.000	99270.000	99320.000
2	15:36:17	86.592%	203.300	-0.134	0.313	0.000	99830.000	99440.000	99530.000
3	15:36:43	85.552%	201.500	-0.001	0.045	0.000	100800.000	101300.000	101200.000
X		85.782%	200.000	0.040	0.124	0.000	100000.000	100000.000	100000.000
σ		0.723%	4.238	0.198	0.164	0.000	739.800	1117.000	1002.000
%RSD		0.843	2.119	494.700	132.200	0.000	0.740	1.117	1.002
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:50	1010.000	12.150	0.000	99880.000	98800.000	98360.000	90.870%	1.874
2	15:36:17	988.500	9.235	0.000	100300.000	101000.000	99730.000	90.216%	0.779
3	15:36:43	1001.000	10.870	0.000	99840.000	100200.000	101900.000	88.907%	0.404
X		1000.000	10.750	0.000	100000.000	100000.000	100000.000	89.998%	1.019
σ		11.000	1.461	0.000	239.600	1127.000	1796.000	0.999%	0.764
%RSD		1.100	13.590	0.000	0.240	1.127	1.796	1.110	74.990
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:50	198.600	198.500	990.800	49350.000	49170.000	197.600	200.000	199.600
2	15:36:17	200.500	199.500	1001.000	50130.000	50190.000	201.000	201.200	201.100
3	15:36:43	200.900	202.100	1008.000	50520.000	50640.000	201.300	198.800	199.300
X		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		1.268	1.842	8.633	594.800	750.400	2.052	1.213	0.976
%RSD		0.634	0.921	0.863	1.190	1.501	1.026	0.606	0.488
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:50	198.000	204.700	203.000	195.300	197.100	196.800	0.000	197.900
2	15:36:17	200.500	198.000	195.300	201.300	205.100	201.500	0.000	201.200
3	15:36:43	201.500	197.400	201.700	203.400	197.800	201.600	0.000	200.900
X		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		1.778	4.041	4.138	4.211	4.419	2.729	0.000	1.806
%RSD		0.889	2.020	2.069	2.106	2.210	1.364	0.000	0.903
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:50	89.073%	0.252	0.410	92.120%	198.300	198.500	198.700	198.300
2	15:36:17	88.602%	0.378	0.313	91.907%	200.200	201.100	198.600	199.300
3	15:36:43	88.158%	0.210	0.022	91.165%	201.500	200.400	202.700	202.400
X		88.611%	0.280	0.248	91.731%	200.000	200.000	200.000	200.000
σ		0.457%	0.088	0.202	0.501%	1.567	1.323	2.335	2.173
%RSD		0.516	31.300	81.250	0.546	0.784	0.661	1.167	1.087
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:35:50	88.436%	0.632	0.322	0.315	199.900	199.300	92.175%	92.960%
2	15:36:17	87.932%	0.435	0.200	0.210	200.500	200.100	91.687%	92.432%
3	15:36:43	87.604%	0.270	0.215	0.254	199.600	200.500	90.538%	92.297%
X		87.991%	0.446	0.246	0.260	200.000	200.000	91.466%	92.563%
σ		0.419%	0.181	0.067	0.052	0.449	0.615	0.840%	0.350%
%RSD		0.477	40.610	27.140	20.200	0.225	0.308	0.919	0.378
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:35:50	197.600	195.200	196.800	196.800	197.000	95.312%		
2	15:36:17	198.500	201.200	200.500	201.100	201.300	94.303%		
3	15:36:43	203.900	203.600	202.600	202.100	201.700	92.893%		
X		200.000	200.000	200.000	200.000	200.000	94.170%		
σ		3.389	4.286	2.934	2.845	2.615	1.215%		
%RSD		1.694	2.143	1.467	1.423	1.308	1.290		

STD3 1467882

1/29/2015 3:39:38 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:05	89.970%	0.452	201.800	200.400	0.000	132.600	97.160	95.230
2	15:40:31	93.703%	0.398	199.600	198.300	0.000	130.900	92.400	93.860
3	15:40:58	92.143%	0.385	198.600	201.300	0.000	135.400	95.610	96.460
X		91.939%	0.411	200.000	200.000	0.000	133.000	95.050	95.180
σ		1.875%	0.035	1.640	1.523	0.000	2.247	2.429	1.303
%RSD		2.039	8.581	0.820	0.761	0.000	1.690	2.556	1.369
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:05	5.596	9995.000	0.000	101.600	133.400	177.400	91.506%	196.100
2	15:40:31	5.446	9955.000	0.000	107.000	118.700	185.800	92.876%	203.000
3	15:40:58	5.653	10050.000	0.000	96.980	128.600	167.200	93.130%	200.900
X		5.565	10000.000	0.000	101.900	126.900	176.800	92.504%	200.000
σ		0.107	47.120	0.000	5.010	7.507	9.316	0.874%	3.560
%RSD		1.922	0.471	0.000	4.918	5.916	5.269	0.945	1.780
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:05	0.243	0.323	1.365	95.690	100.700	0.204	0.453	0.505
2	15:40:31	0.204	0.298	1.332	83.410	75.590	0.249	0.454	0.430
3	15:40:58	0.158	0.278	1.373	70.420	70.580	0.215	0.582	0.429
X		0.202	0.299	1.357	83.170	82.270	0.223	0.496	0.455
σ		0.042	0.023	0.022	12.640	16.110	0.023	0.074	0.043
%RSD		20.940	7.583	1.592	15.190	19.590	10.410	14.990	9.500
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:05	0.475	1.498	1.220	0.190	0.370	-0.103	0.000	0.296
2	15:40:31	0.533	1.181	1.523	0.109	-0.260	-0.813	0.000	0.297
3	15:40:58	0.600	1.038	1.145	0.157	0.293	-0.437	0.000	0.298
X		0.536	1.239	1.296	0.152	0.134	-0.451	0.000	0.297
σ		0.062	0.235	0.200	0.041	0.344	0.355	0.000	0.001
%RSD		11.640	18.990	15.460	26.660	256.100	78.790	0.000	0.471
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:05	89.708%	191.400	191.100	91.541%	0.230	0.208	0.414	-2.614
2	15:40:31	91.386%	202.900	203.400	91.439%	0.222	0.209	0.429	-2.656
3	15:40:58	94.101%	205.700	205.400	93.413%	0.212	0.234	0.350	-2.900
X		91.732%	200.000	200.000	92.131%	0.221	0.217	0.398	-2.723
σ		2.217%	7.582	7.743	1.111%	0.009	0.015	0.042	0.154
%RSD		2.417	3.791	3.871	1.206	4.103	6.696	10.510	5.662
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:05	90.564%	197.800	197.500	199.300	0.256	0.504	90.496%	91.764%
2	15:40:31	93.267%	201.100	201.800	201.000	0.302	0.547	93.687%	93.905%
3	15:40:58	93.495%	201.100	200.600	199.700	0.367	0.473	95.001%	95.805%
X		92.442%	200.000	200.000	200.000	0.309	0.508	93.061%	93.825%
σ		1.631%	1.940	2.204	0.907	0.056	0.037	2.316%	2.022%
%RSD		1.764	0.970	1.102	0.453	18.120	7.348	2.489	2.155
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:40:05	0.217	0.203	0.324	0.277	0.301	91.640%		
2	15:40:31	0.241	0.209	0.321	0.283	0.295	93.671%		
3	15:40:58	0.209	0.195	0.319	0.313	0.311	94.831%		
X		0.222	0.203	0.322	0.291	0.302	93.381%		
σ		0.017	0.007	0.002	0.019	0.008	1.615%		
%RSD		7.435	3.477	0.718	6.606	2.501	1.730		

ICV 1451360 1/29/2015 3:43:56 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:22	88.296%	75.860	81.290	86.010	0.000	38600.000	37750.000	37820.000
2	15:44:48	88.709%	81.350	86.910	84.600	0.000	38780.000	38170.000	38390.000
3	15:45:15	88.668%	80.080	83.910	85.140	0.000	39170.000	38460.000	38780.000
X		88.558%	98.872%	105.046%	106.564%	0.000	97.124%	95.316%	95.825%
σ		0.227%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.257	3.636	3.348	0.835	0.000	0.743	0.945	1.256
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:22	377.000	4731.000	0.000	38670.000	37990.000	37460.000	89.707%	78.860
2	15:44:48	383.800	4994.000	0.000	39050.000	38340.000	38250.000	91.851%	79.720
3	15:45:15	389.000	5220.000	0.000	39510.000	39460.000	39080.000	91.375%	81.230
X		95.818%	124.550%	0.000	97.694%	96.491%	95.653%	90.978%	99.920%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.126%	n/a
%RSD		1.575	4.912	0.000	1.075	1.982	2.124	1.238	1.504
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:22	77.050	78.050	360.900	19230.000	18050.000	78.290	77.880	80.110
2	15:44:48	77.210	78.260	364.400	19460.000	18220.000	78.540	79.140	79.610
3	15:45:15	78.310	79.680	370.900	19850.000	18600.000	79.790	79.460	80.060
X		96.901%	98.329%	91.347%	97.566%	91.440%	98.592%	98.536%	99.910%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.886	1.123	1.392	1.593	1.533	1.020	1.060	0.341
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:22	79.900	77.570	78.620	77.270	77.670	77.170	0.000	77.370
2	15:44:48	79.210	79.920	79.870	78.590	81.370	78.690	0.000	77.980
3	15:45:15	80.570	81.430	81.080	80.740	79.340	83.000	0.000	79.510
X		99.869%	99.554%	99.822%	98.581%	99.330%	99.527%	0.000	97.859%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.852	2.445	1.537	2.222	2.333	3.800	0.000	1.412
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:22	86.671%	78.880	78.920	89.679%	79.530	80.030	79.030	77.540
2	15:44:48	88.414%	82.010	80.800	91.928%	78.550	78.630	78.740	76.260
3	15:45:15	87.293%	83.910	83.210	92.334%	79.750	80.400	79.760	77.420
X		87.459%	101.999%	101.221%	91.314%	99.098%	99.604%	98.971%	96.343%
σ		0.883%	n/a	n/a	1.430%	n/a	n/a	n/a	n/a
%RSD		1.010	3.114	2.653	1.566	0.807	1.171	0.661	0.916
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:22	86.028%	78.990	80.240	81.410	77.550	79.220	88.754%	89.608%
2	15:44:48	89.721%	80.250	78.800	79.980	78.230	79.610	90.707%	91.175%
3	15:45:15	88.875%	82.210	80.440	81.380	80.220	79.900	90.975%	91.707%
X		88.208%	100.608%	99.780%	101.155%	98.335%	99.472%	90.145%	90.830%
σ		1.935%	n/a	n/a	n/a	n/a	n/a	1.212%	1.091%
%RSD		2.193	2.017	1.120	1.008	1.764	0.430	1.345	1.201
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:44:22	81.060	78.650	79.710	75.640	77.620	92.237%		
2	15:44:48	83.390	80.890	82.090	80.560	80.430	91.422%		
3	15:45:15	82.460	80.650	81.430	78.530	80.070	93.228%		
X		102.876%	100.078%	101.344%	97.803%	99.217%	92.296%		
σ		n/a	n/a	n/a	n/a	n/a	0.905%		
%RSD		1.426	1.539	1.519	3.158	1.923	0.980		



ICV 1/29/2015 3:48:16 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:42	92.675%	0.161	0.908	1.183	0.000	20.300	77.960	79.380
2	15:49:09	93.843%	0.104	1.236	0.680	0.000	24.060	78.890	82.030
3	15:49:35	95.980%	0.102	0.630	1.128	0.000	32.080	82.060	84.110
X		94.166%	0.122	0.925	0.997	0.000	25.480	79.640	81.840
σ		1.676%	0.034	0.304	0.276	0.000	6.017	2.151	2.372
%RSD		1.780	27.540	32.830	27.640	0.000	23.620	2.700	2.898
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:42	1.879	4057.000	0.000	122.400	96.820	104.100	92.384%	0.824
2	15:49:09	1.832	4005.000	0.000	115.700	63.160	100.900	95.689%	1.011
3	15:49:35	2.364	4115.000	0.000	131.800	82.640	109.100	95.964%	0.797
X		2.025	4059.000	0.000	123.300	80.870	104.700	94.679%	0.877
σ		0.295	54.830	0.000	8.092	16.900	4.149	1.992%	0.117
%RSD		14.550	1.351	0.000	6.564	20.900	3.963	2.104	13.290
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:42	-0.002	0.049	0.100	16.960	21.610	0.027	-0.003	0.080
2	15:49:09	0.007	0.003	0.110	12.330	14.830	0.031	-0.031	0.100
3	15:49:35	-0.026	0.032	0.196	12.220	16.870	0.018	0.141	0.103
X		-0.007	0.028	0.135	13.840	17.770	0.025	0.036	0.094
σ		0.017	0.023	0.053	2.701	3.480	0.007	0.092	0.012
%RSD		258.400	82.640	39.110	19.520	19.580	26.460	259.200	13.260
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:42	0.114	1.318	0.953	0.109	0.974	0.571	0.000	0.048
2	15:49:09	0.117	1.082	1.144	-0.306	0.361	-2.051	0.000	0.042
3	15:49:35	0.140	1.200	1.211	-0.187	0.712	-1.839	0.000	0.050
X		0.124	1.200	1.102	-0.128	0.682	-1.107	0.000	0.046
σ		0.014	0.118	0.134	0.213	0.307	1.457	0.000	0.004
%RSD		11.290	9.854	12.130	166.600	45.040	131.700	0.000	8.437
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:42	91.196%	0.225	0.189	92.261%	0.028	0.022	0.010	-2.301
2	15:49:09	93.820%	0.244	-0.011	94.954%	0.040	0.027	0.033	-2.248
3	15:49:35	97.207%	0.021	0.088	96.914%	0.044	0.047	0.026	2.108
X		94.074%	0.163	0.089	94.709%	0.037	0.032	0.023	-0.814
σ		3.014%	0.124	0.100	2.336%	0.008	0.013	0.012	2.530
%RSD		3.204	75.690	112.900	2.467	21.710	41.410	51.010	311.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:42	94.867%	0.180	0.095	0.124	-0.008	0.044	93.684%	94.226%
2	15:49:09	94.284%	0.209	0.099	0.108	0.010	0.043	97.387%	97.851%
3	15:49:35	98.374%	0.151	0.105	0.128	0.078	0.054	99.688%	99.843%
X		95.842%	0.180	0.100	0.120	0.027	0.047	96.920%	97.306%
σ		2.213%	0.029	0.005	0.010	0.045	0.006	3.029%	2.847%
%RSD		2.309	15.920	4.903	8.614	168.500	13.220	3.125	2.926
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:48:42	0.021	0.025	0.040	0.025	0.037	93.779%		
2	15:49:09	0.032	0.023	0.055	0.035	0.048	93.634%		
3	15:49:35	0.031	0.034	0.053	0.054	0.049	96.415%		
X		0.028	0.028	0.049	0.038	0.045	94.609%		
σ		0.006	0.006	0.008	0.015	0.007	1.565%		
%RSD		21.870	21.490	16.610	38.980	15.210	1.655		

ICB 1/29/2015 3:52:36 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:02	93.715%	0.141	0.540	0.204	0.000	5.885	-0.101	0.515
2	15:53:29	94.134%	0.049	0.185	0.200	0.000	7.832	-0.697	1.120
3	15:53:55	94.924%	0.139	-0.281	0.390	0.000	7.245	1.265	-0.436
X		94.258%	0.110	0.148	0.265	0.000	6.987	0.156	0.400
σ		0.614%	0.052	0.412	0.108	0.000	0.999	1.006	0.785
%RSD		0.651	47.870	278.500	40.930	0.000	14.290	646.400	196.200
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:02	-0.115	11.730	0.000	8.663	27.910	23.270	94.555%	0.115
2	15:53:29	0.049	11.850	0.000	-4.545	37.180	24.340	95.925%	-0.024
3	15:53:55	-0.224	12.080	0.000	0.759	30.690	24.430	96.996%	-0.216
X		-0.097	11.890	0.000	1.626	31.930	24.010	95.825%	-0.042
σ		0.138	0.179	0.000	6.646	4.760	0.644	1.224%	0.166
%RSD		142.300	1.507	0.000	408.800	14.910	2.681	1.277	399.800
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:02	-0.009	-0.007	0.012	-0.503	4.148	-0.008	0.055	0.049
2	15:53:29	0.033	0.019	0.054	-2.505	1.549	-0.013	-0.064	0.014
3	15:53:55	0.010	-0.026	0.033	-2.854	-0.731	0.008	-0.003	0.032
X		0.012	-0.005	0.033	-1.954	1.655	-0.004	-0.004	0.032
σ		0.021	0.022	0.021	1.269	2.441	0.011	0.059	0.017
%RSD		182.800	461.000	63.900	64.950	147.500	258.000	1473.000	54.970
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:02	0.025	0.323	0.418	-0.183	0.302	-1.287	0.000	0.025
2	15:53:29	-0.004	0.505	0.638	0.127	1.037	0.491	0.000	0.015
3	15:53:55	0.010	0.505	0.465	0.133	0.403	0.775	0.000	0.005
X		0.010	0.445	0.507	0.025	0.581	-0.007	0.000	0.015
σ		0.015	0.105	0.116	0.181	0.398	1.118	0.000	0.010
%RSD		143.900	23.600	22.880	710.800	68.610	15280.000	0.000	66.620
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:02	94.877%	-0.419	-0.476	96.433%	-0.006	0.010	-0.002	-2.339
2	15:53:29	97.410%	-0.442	-0.442	97.445%	-0.000	-0.006	-0.002	2.040
3	15:53:55	98.285%	-0.387	-0.403	97.180%	0.019	-0.009	-0.002	-2.285
X		96.857%	-0.416	-0.440	97.019%	0.004	-0.001	-0.002	-0.861
σ		1.770%	0.028	0.036	0.525%	0.013	0.010	0.000	2.513
%RSD		1.827	6.680	8.285	0.541	312.700	693.300	2.478	291.700
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:53:02	96.493%	0.182	0.039	0.052	0.009	0.018	98.263%	97.474%
2	15:53:29	98.089%	0.062	0.033	0.066	-0.015	0.008	99.676%	99.756%
3	15:53:55	97.697%	0.089	0.053	0.065	-0.003	0.008	99.669%	100.780%
X		97.426%	0.111	0.042	0.061	-0.003	0.011	99.203%	99.337%
σ		0.831%	0.063	0.010	0.008	0.012	0.006	0.814%	1.692%
%RSD		0.853	56.570	24.190	13.560	392.100	52.930	0.820	1.704
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:53:02	0.004	0.003	0.007	0.000	0.004	105.963%		
2	15:53:29	0.001	0.001	0.001	0.004	0.006	105.197%		
3	15:53:55	0.002	0.001	0.005	0.012	0.008	104.688%		
X		0.002	0.002	0.005	0.005	0.006	105.283%		
σ		0.001	0.001	0.003	0.006	0.002	0.642%		
%RSD		59.500	79.820	68.780	113.000	35.860	0.610		

CRI 1470869 1/29/2015 3:56:54 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:21	89.921%	1.004	5.935	5.280	0.000	102.100	94.550	90.710
2	15:57:47	92.574%	0.772	6.226	4.777	0.000	103.100	92.990	93.720
3	15:58:14	93.992%	1.144	5.548	5.409	0.000	97.330	89.860	93.050
X		92.163%	97.341%	118.060%	103.106%	0.000	126.056%	92.469%	92.492%
σ		2.066%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.242	19.310	5.762	6.472	0.000	3.054	2.582	1.707
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:21	27.800	487.400	0.000	109.300	112.400	90.270	91.654%	4.326
2	15:57:47	29.010	484.100	0.000	117.700	84.850	92.060	93.983%	5.728
3	15:58:14	28.670	481.700	0.000	107.200	72.140	98.280	94.530%	4.390
X		94.976%	96.876%	0.000	111.373%	89.796%	93.536%	93.389%	96.296%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.527%	n/a
%RSD		2.192	0.600	0.000	5.001	22.920	4.496	1.635	16.450
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:21	0.798	1.905	4.647	45.920	49.300	0.499	1.071	2.143
2	15:57:47	0.706	1.990	4.783	46.700	49.100	0.442	0.880	2.211
3	15:58:14	0.894	2.055	4.695	46.300	42.760	0.520	1.138	2.061
X		79.950%	99.165%	94.169%	92.610%	94.106%	97.422%	102.985%	106.903%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		11.730	3.797	1.461	0.840	7.906	8.235	12.990	3.509
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:21	2.207	5.179	4.982	1.370	5.493	6.724	0.000	4.659
2	15:57:47	2.132	4.819	5.447	0.938	4.221	4.303	0.000	4.689
3	15:58:14	2.319	5.304	4.954	0.356	3.456	1.364	0.000	4.692
X		110.976%	102.017%	102.558%	88.834%	87.793%	82.604%	0.000	93.596%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		4.233	4.937	5.401	57.270	23.440	64.990	0.000	0.395
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:21	89.738%	4.331	4.147	90.383%	1.001	1.003	1.082	-1.277
2	15:57:47	92.036%	4.581	4.241	93.481%	0.939	0.970	1.010	-1.305
3	15:58:14	94.745%	4.107	4.238	93.118%	1.032	1.007	0.989	-1.379
X		92.173%	86.796%	84.175%	92.327%	99.061%	99.345%	102.699%	-132.016%
σ		2.506%	n/a	n/a	1.694%	n/a	n/a	n/a	n/a
%RSD		2.719	5.464	1.266	1.835	4.813	2.042	4.758	3.996
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:57:21	89.891%	5.014	1.860	1.874	9.932	9.988	90.729%	91.661%
2	15:57:47	90.841%	5.068	1.854	1.910	9.550	9.520	92.865%	93.117%
3	15:58:14	93.014%	5.760	1.838	1.887	9.581	10.030	96.269%	95.965%
X		91.249%	105.615%	92.549%	94.512%	96.875%	98.460%	93.288%	93.581%
σ		1.601%	n/a	n/a	n/a	n/a	n/a	2.794%	2.189%
%RSD		1.754	7.874	0.608	0.971	2.190	2.876	2.995	2.339
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:57:21	0.885	0.899	1.033	0.895	0.943	97.445%		
2	15:57:47	0.993	0.904	1.043	0.942	0.971	96.088%		
3	15:58:14	0.954	0.942	0.991	0.923	0.948	97.192%		
X		94.429%	91.477%	102.233%	91.995%	95.380%	96.909%		
σ		n/a	n/a	n/a	n/a	n/a	0.721%		
%RSD		5.787	2.589	2.737	2.580	1.539	0.745		

ICSA 1462866 1/29/2015 4:01:14 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:01:40	80.810%	0.185	-0.242	0.593	0.000	97090.000	95580.000	95530.000
2	16:02:07	81.262%	0.058	0.161	0.493	0.000	99170.000	98460.000	98400.000
3	16:02:34	82.519%	0.161	0.550	0.353	0.000	98210.000	97400.000	97850.000
X		81.530%	0.134	0.157	0.480	0.000	98160.000	97150.000	97260.000
σ		0.886%	0.068	0.396	0.121	0.000	1040.000	1456.000	1521.000
%RSD		1.087	50.280	253.000	25.200	0.000	1.059	1.498	1.564
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:01:40	95450.000	29.030	0.000	95860.000	93640.000	94680.000	84.236%	2023.000
2	16:02:07	98900.000	29.410	0.000	98700.000	98420.000	99630.000	82.865%	2125.000
3	16:02:34	98680.000	28.860	0.000	98430.000	99580.000	100900.000	82.792%	2128.000
X		97670.000	29.100	0.000	97670.000	97210.000	98410.000	83.298%	2092.000
σ		1931.000	0.277	0.000	1567.000	3147.000	3294.000	0.814%	59.540
%RSD		1.977	0.953	0.000	1.604	3.237	3.347	0.977	2.846
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:01:40	-0.098	0.654	0.574	94740.000	87480.000	0.156	-0.293	1.260
2	16:02:07	-0.335	0.909	0.523	99780.000	91490.000	0.085	-0.283	1.309
3	16:02:34	-0.264	0.802	0.505	99180.000	91600.000	0.098	-0.485	1.274
X		-0.232	0.789	0.534	97900.000	90190.000	0.113	-0.354	1.281
σ		0.121	0.128	0.036	2752.000	2347.000	0.038	0.114	0.025
%RSD		52.220	16.220	6.714	2.811	2.602	33.520	32.260	1.964
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:01:40	1.780	2.618	1.935	0.159	-0.295	0.312	0.000	0.603
2	16:02:07	1.845	2.548	1.673	-0.323	1.163	-0.760	0.000	0.673
3	16:02:34	2.059	2.674	1.614	-0.069	0.546	-0.340	0.000	0.630
X		1.895	2.613	1.741	-0.077	0.471	-0.263	0.000	0.635
σ		0.146	0.063	0.171	0.241	0.732	0.540	0.000	0.035
%RSD		7.701	2.416	9.806	311.300	155.300	205.800	0.000	5.582
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:01:40	82.698%	2027.000	2078.000	83.702%	0.076	0.079	1.770	-1.943
2	16:02:07	83.993%	2117.000	2191.000	84.132%	0.072	0.058	1.618	-2.075
3	16:02:34	85.393%	2111.000	2204.000	84.036%	0.045	0.047	1.839	-1.941
X		84.028%	2085.000	2157.000	83.957%	0.064	0.062	1.742	-1.986
σ		1.348%	50.480	69.330	0.225%	0.017	0.016	0.113	0.077
%RSD		1.604	2.421	3.214	0.268	26.650	26.720	6.498	3.862
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:01:40	82.812%	0.154	0.057	0.083	0.086	0.098	85.872%	87.171%
2	16:02:07	82.852%	0.161	0.063	0.077	0.058	0.128	87.074%	88.359%
3	16:02:34	84.575%	0.168	0.089	0.085	0.089	0.141	88.783%	90.654%
X		83.413%	0.161	0.070	0.082	0.078	0.123	87.243%	88.728%
σ		1.007%	0.007	0.017	0.004	0.017	0.022	1.463%	1.771%
%RSD		1.207	4.366	24.410	4.998	22.180	17.820	1.677	1.996
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:01:40	0.008	0.010	0.200	0.203	0.191	100.130%		
2	16:02:07	0.009	0.010	0.208	0.196	0.206	92.896%		
3	16:02:34	0.009	0.008	0.238	0.219	0.230	88.970%		
X		0.009	0.009	0.216	0.206	0.209	93.999%		
σ		0.001	0.001	0.020	0.012	0.019	5.661%		
%RSD		6.067	14.090	9.162	5.813	9.277	6.022		

IC SAB 1462867 1/29/2015 4:05:34 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:06:00	78.333%	20.080	45.790	50.050	0.000	101200.000	99240.000	99490.000
2	16:06:27	78.361%	18.870	48.990	52.060	0.000	102600.000	101600.000	101900.000
3	16:06:54	80.883%	19.430	49.140	49.700	0.000	101500.000	101100.000	102200.000
X		79.192%	97.297%	95.942%	101.205%	0.000	101.765%	100.657%	101.204%
σ		1.464%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.849	3.106	3.941	2.512	0.000	0.751	1.242	1.475
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:06:00	99820.000	521.900	0.000	102000.000	100400.000	99830.000	80.900%	2115.000
2	16:06:27	102500.000	530.100	0.000	101700.000	101900.000	104000.000	80.828%	2194.000
3	16:06:54	102500.000	528.600	0.000	102700.000	104000.000	104500.000	80.058%	2235.000
X		101.593%	105.372%	0.000	102.154%	102.116%	102.774%	80.596%	109.074%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.467%	n/a
%RSD		1.514	0.834	0.000	0.498	1.775	2.500	0.579	2.792
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:06:00	18.660	20.300	18.530	99990.000	91880.000	20.190	20.080	21.380
2	16:06:27	19.510	21.060	18.800	103500.000	95560.000	20.790	20.700	22.280
3	16:06:54	19.180	20.900	19.220	105500.000	97290.000	20.940	19.810	22.010
X		95.586%	103.759%	94.239%	102.979%	94.914%	103.193%	100.986%	109.446%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.265	1.936	1.861	2.695	2.911	1.934	2.274	2.098
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:06:00	21.970	21.880	21.830	21.400	50.730	54.410	0.000	19.670
2	16:06:27	22.230	22.490	22.410	21.310	52.160	57.310	0.000	20.270
3	16:06:54	22.730	23.310	22.790	21.360	53.920	52.490	0.000	20.750
X		111.551%	90.238%	89.376%	106.780%	104.540%	109.473%	0.000	101.160%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.718	3.191	2.154	0.216	3.059	4.441	0.000	2.668
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:06:00	79.495%	2148.000	2180.000	81.940%	19.860	19.910	21.340	17.610
2	16:06:27	79.736%	2234.000	2322.000	81.691%	19.750	19.640	22.000	17.590
3	16:06:54	81.037%	2259.000	2341.000	82.955%	19.820	19.590	22.050	17.850
X		80.090%	110.691%	114.059%	82.195%	99.037%	98.569%	108.987%	88.408%
σ		0.830%	n/a	n/a	0.669%	n/a	n/a	n/a	n/a
%RSD		1.036	2.624	3.849	0.814	0.266	0.881	1.828	0.811
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:06:00	80.525%	98.850	19.550	19.390	19.310	20.130	87.271%	88.463%
2	16:06:27	83.185%	98.920	19.760	19.900	20.110	19.770	87.724%	89.234%
3	16:06:54	83.700%	100.200	19.680	19.850	19.020	20.290	87.355%	88.249%
X		82.470%	99.323%	98.309%	98.552%	97.396%	100.316%	87.450%	88.649%
σ		1.704%	n/a	n/a	n/a	n/a	n/a	0.241%	0.518%
%RSD		2.067	0.761	0.537	1.431	2.917	1.321	0.276	0.585
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:06:00	19.030	18.040	19.530	19.480	19.330	86.883%		
2	16:06:27	19.380	18.650	19.580	20.180	19.730	88.242%		
3	16:06:54	19.730	19.330	20.540	20.420	20.410	86.472%		
X		96.893%	93.374%	99.422%	100.118%	99.120%	87.199%		
σ		n/a	n/a	n/a	n/a	n/a	0.926%		
%RSD		1.806	3.461	2.837	2.437	2.768	1.062		

CCV 1467888 1/29/2015 4:09:52 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:18	83.576%	94.940	92.940	95.940	0.000	47450.000	46390.000	46440.000
2	16:10:45	85.690%	94.380	94.340	99.070	0.000	48070.000	47420.000	47390.000
3	16:11:11	86.424%	98.150	98.830	100.300	0.000	48040.000	47770.000	47450.000
X		85.230%	95.826%	95.371%	98.453%	0.000	95.708%	94.385%	94.192%
σ		1.479%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.735	2.125	3.226	2.301	0.000	0.733	1.514	1.205
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:18	456.500	5371.000	0.000	47020.000	45160.000	45600.000	88.933%	95.810
2	16:10:45	474.000	5478.000	0.000	48090.000	47870.000	47210.000	91.074%	98.530
3	16:11:11	474.200	5488.000	0.000	49180.000	48870.000	47780.000	90.624%	98.340
X		93.648%	108.918%	0.000	96.194%	94.602%	93.723%	90.210%	97.559%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.129%	n/a
%RSD		2.177	1.194	0.000	2.239	4.055	2.411	1.251	1.558
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:18	92.380	91.560	442.500	23600.000	22170.000	93.740	93.500	94.940
2	16:10:45	93.210	94.720	450.400	24030.000	22650.000	95.070	93.790	98.550
3	16:11:11	93.630	94.610	458.400	24590.000	23180.000	97.900	97.130	99.910
X		93.077%	93.631%	90.087%	96.301%	90.668%	95.570%	94.805%	97.800%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.684	1.912	1.774	2.071	2.237	2.226	2.125	2.626
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:18	95.390	94.030	93.920	96.280	95.840	97.670	0.000	95.500
2	16:10:45	96.920	98.970	99.460	98.240	97.040	99.690	0.000	97.280
3	16:11:11	96.830	99.800	97.540	99.320	99.320	97.570	0.000	98.190
X		96.378%	97.601%	96.977%	97.947%	97.402%	98.309%	0.000	96.990%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.890	3.196	2.900	1.573	1.813	1.216	0.000	1.409
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:18	83.481%	108.300	107.000	87.222%	98.800	100.900	98.510	96.880
2	16:10:45	86.805%	109.600	108.000	90.343%	98.700	100.700	99.340	97.100
3	16:11:11	87.275%	107.800	108.200	90.569%	101.300	101.600	100.300	101.400
X		85.854%	108.570%	107.748%	89.378%	99.594%	101.075%	99.386%	98.465%
σ		2.068%	n/a	n/a	1.871%	n/a	n/a	n/a	n/a
%RSD		2.409	0.830	0.597	2.093	1.465	0.498	0.900	2.598
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:18	81.657%	98.810	97.500	98.780	99.650	99.550	86.973%	88.193%
2	16:10:45	85.858%	97.970	97.460	99.140	99.670	99.440	91.132%	90.559%
3	16:11:11	85.663%	102.400	100.100	100.700	99.070	101.800	91.304%	91.638%
X		84.393%	99.731%	98.364%	99.525%	99.463%	100.271%	89.803%	90.130%
σ		2.371%	n/a	n/a	n/a	n/a	n/a	2.452%	1.762%
%RSD		2.810	2.373	1.549	0.999	0.338	1.345	2.731	1.955
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:10:18	106.000	102.300	103.900	103.600	104.500	82.473%		
2	16:10:45	106.700	104.200	107.600	106.600	107.100	84.893%		
3	16:11:11	107.500	104.800	109.000	107.500	108.500	85.289%		
X		106.726%	103.770%	106.847%	105.904%	106.718%	84.219%		
σ		n/a	n/a	n/a	n/a	n/a	1.524%		
%RSD		0.700	1.270	2.469	1.916	1.885	1.810		

CCB1 1/29/2015 4:17:18 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:44	88.986%	0.033	-0.143	0.444	0.000	28.950	0.377	1.925
2	16:18:11	92.583%	0.031	0.908	0.183	0.000	25.660	1.507	1.828
3	16:18:37	91.783%	0.032	0.561	0.245	0.000	25.650	-0.070	0.470
X		91.118%	0.032	0.442	0.291	0.000	26.750	0.605	1.408
σ		1.889%	0.001	0.535	0.136	0.000	1.900	0.813	0.814
%RSD		2.073	2.425	121.200	46.900	0.000	7.101	134.400	57.780
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:44	0.312	3.334	0.000	6.728	36.260	27.960	90.570%	0.793
2	16:18:11	0.331	1.533	0.000	11.680	16.370	27.160	93.113%	1.191
3	16:18:37	0.179	2.098	0.000	10.240	44.580	26.440	93.721%	0.840
X		0.274	2.322	0.000	9.552	32.400	27.190	92.468%	0.942
σ		0.083	0.921	0.000	2.549	14.500	0.760	1.672%	0.217
%RSD		30.300	39.670	0.000	26.680	44.740	2.793	1.808	23.080
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:44	-0.068	-0.040	0.073	6.097	13.400	0.010	0.057	0.066
2	16:18:11	0.010	-0.000	0.047	4.502	6.894	0.015	-0.028	0.096
3	16:18:37	-0.001	0.013	0.070	2.465	5.388	-0.007	-0.090	0.094
X		-0.020	-0.009	0.064	4.355	8.561	0.006	-0.020	0.085
σ		0.042	0.027	0.014	1.820	4.258	0.012	0.074	0.017
%RSD		213.100	299.100	22.670	41.800	49.740	196.100	363.800	19.600
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:44	0.096	0.533	0.464	-0.318	1.443	-1.974	0.000	0.023
2	16:18:11	0.017	0.418	0.363	-0.053	1.022	-0.307	0.000	0.025
3	16:18:37	0.016	0.440	0.388	-0.330	-0.130	-2.338	0.000	0.009
X		0.043	0.464	0.405	-0.234	0.779	-1.540	0.000	0.019
σ		0.046	0.061	0.053	0.157	0.814	1.083	0.000	0.009
%RSD		105.500	13.210	13.050	67.130	104.600	70.350	0.000	44.790
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:44	89.465%	0.533	0.381	94.922%	-0.016	0.010	0.005	-2.307
2	16:18:11	92.138%	0.412	0.418	92.219%	0.000	0.006	0.005	-2.329
3	16:18:37	92.865%	0.353	0.370	98.019%	0.006	-0.005	0.004	-2.331
X		91.489%	0.433	0.389	95.053%	-0.003	0.003	0.004	-2.322
σ		1.790%	0.092	0.025	2.902%	0.012	0.008	0.000	0.013
%RSD		1.957	21.230	6.388	3.054	364.500	216.200	4.720	0.579
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:17:44	89.912%	0.177	0.117	0.138	0.019	0.018	91.405%	91.206%
2	16:18:11	90.870%	0.176	0.119	0.130	0.012	0.017	93.088%	92.953%
3	16:18:37	92.578%	0.138	0.157	0.113	-0.007	0.041	94.788%	93.470%
X		91.120%	0.163	0.131	0.127	0.008	0.025	93.093%	92.543%
σ		1.350%	0.022	0.023	0.013	0.014	0.014	1.692%	1.186%
%RSD		1.482	13.640	17.290	10.220	169.700	54.150	1.817	1.282
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:17:44	0.005	0.007	0.008	0.010	0.014	93.132%		
2	16:18:11	0.004	0.006	0.023	0.007	0.014	92.667%		
3	16:18:37	0.005	0.004	0.023	0.012	0.017	95.291%		
X		0.005	0.006	0.018	0.010	0.015	93.697%		
σ		0.000	0.001	0.009	0.003	0.002	1.400%		
%RSD		10.240	21.280	50.090	29.430	12.620	1.494		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:22:04	88.828%	0.033	0.348	0.117	0.000	26.250	-0.817	-1.218	
2	16:22:31	90.638%	0.051	-0.150	0.165	0.000	28.310	-0.294	-0.231	
3	16:22:57	93.223%	0.068	-0.160	0.179	0.000	25.720	-1.814	-1.400	
X		90.896%	0.051	0.013	0.154	0.000	26.760	-0.975	-0.950	
		$\sigma$	2.209%	0.018	0.290	0.033	0.000	1.366	0.773	0.629
		%RSD	2.430	34.630	2255.000	21.270	0.000	5.104	79.240	66.220
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:22:04	-0.098	3.011	0.000	12.340	610.500	501.900	92.668%	0.156	
2	16:22:31	-0.007	0.238	0.000	12.230	503.900	528.200	92.908%	0.300	
3	16:22:57	-0.051	1.389	0.000	14.900	620.400	538.800	94.057%	0.764	
X		-0.052	1.546	0.000	13.160	578.200	523.000	93.211%	0.407	
		$\sigma$	0.046	1.393	0.000	1.511	64.610	19.040	0.742%	0.318
		%RSD	87.920	90.100	0.000	11.480	11.170	3.640	0.797	78.150
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:22:04	-0.052	-0.024	0.021	-2.305	8.242	-0.006	0.041	-0.030	
2	16:22:31	-0.019	0.006	0.046	-2.350	1.952	-0.009	0.060	-0.047	
3	16:22:57	-0.003	-0.011	0.071	-2.803	2.412	0.014	-0.011	0.038	
X		-0.025	-0.010	0.046	-2.486	4.202	-0.000	0.030	-0.013	
		$\sigma$	0.025	0.015	0.025	0.276	3.506	0.013	0.037	0.045
		%RSD	102.700	155.100	54.610	11.090	83.440	2698.000	122.300	339.800
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:22:04	0.015	6.422	6.367	-0.422	0.094	-3.286	0.000	0.134	
2	16:22:31	-0.035	6.604	6.391	-0.393	-0.529	-3.197	0.000	0.126	
3	16:22:57	-0.006	7.152	6.553	-0.324	0.213	-2.779	0.000	0.129	
X		-0.009	6.726	6.437	-0.380	-0.074	-3.088	0.000	0.130	
		$\sigma$	0.025	0.380	0.101	0.050	0.399	0.271	0.000	0.005
		%RSD	292.000	5.654	1.573	13.300	536.500	8.766	0.000	3.496
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:22:04	96.176%	-0.198	-0.287	92.664%	-0.000	-0.015	-0.007	-2.296	
2	16:22:31	98.686%	-0.174	-0.223	98.334%	-0.020	-0.021	0.004	-2.318	
3	16:22:57	102.204%	-0.095	-0.159	95.003%	-0.020	-0.010	0.004	0.479	
X		99.022%	-0.156	-0.223	95.333%	-0.013	-0.016	0.000	-1.378	
		$\sigma$	3.028%	0.054	0.064	2.850%	0.011	0.005	0.007	1.609
		%RSD	3.058	34.430	28.670	2.989	86.110	34.070	1755.000	116.700
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:22:04	92.190%	0.098	0.046	0.051	0.006	0.050	90.862%	92.142%	
2	16:22:31	93.793%	0.089	0.043	0.059	0.018	0.020	92.850%	95.176%	
3	16:22:57	93.499%	0.123	0.072	0.070	0.023	0.030	94.901%	95.665%	
X		93.161%	0.103	0.053	0.060	0.016	0.033	92.871%	94.328%	
		$\sigma$	0.853%	0.018	0.016	0.009	0.015	2.019%	1.909%	
		%RSD	0.916	17.200	29.790	15.460	55.560	45.030	2.174	2.023
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	16:22:04	0.002	0.004	0.002	-0.007	0.000	95.915%			
2	16:22:31	0.004	0.003	-0.000	0.002	0.003	97.110%			
3	16:22:57	0.004	0.005	0.005	-0.001	0.001	94.818%			
X		0.003	0.004	0.002	-0.002	0.001	95.948%			
		$\sigma$	0.001	0.001	0.002	0.001	1.146%			
		%RSD	30.170	25.530	101.600	201.600	105.600	1.195		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:26:19	94.329%	0.031	-0.164	0.172	0.000	19.180	-1.543	-1.160	
2	16:26:46	96.341%	0.119	-0.057	0.159	0.000	18.550	-3.159	-1.884	
3	16:27:13	93.819%	0.086	0.536	0.033	0.000	21.390	-2.167	-1.201	
X		94.829%	0.078	0.105	0.121	0.000	19.710	-2.290	-1.415	
		$\sigma$	1.333%	0.045	0.377	0.077	0.000	1.489	0.815	0.406
		%RSD	1.406	56.790	358.700	63.280	0.000	7.555	35.590	28.720
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:26:19	0.190	0.756	0.000	-1.501	21.620	5.387	95.159%	1.367	
2	16:26:46	0.230	0.241	0.000	3.516	-0.776	6.357	97.465%	2.158	
3	16:27:13	0.188	1.321	0.000	13.090	11.250	7.909	96.497%	1.803	
X		0.203	0.773	0.000	5.035	10.700	6.551	96.374%	1.776	
		$\sigma$	0.023	0.540	0.000	7.412	11.210	1.272	1.158%	0.396
		%RSD	11.570	69.850	0.000	147.200	104.800	19.420	1.202	22.320
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:26:19	-0.026	-0.009	0.077	-3.474	-1.230	-0.008	-0.098	0.080	
2	16:26:46	-0.021	-0.017	0.100	-5.815	0.140	0.003	-0.054	0.097	
3	16:27:13	-0.062	0.012	0.072	-4.549	-1.811	0.003	-0.089	0.061	
X		-0.037	-0.005	0.083	-4.613	-0.967	-0.000	-0.080	0.079	
		$\sigma$	0.022	0.015	1.172	1.002	0.006	0.023	0.018	
		%RSD	61.360	320.800	18.240	25.400	103.600	1310.000	29.170	22.620
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:26:19	0.042	0.218	0.410	-0.541	0.862	-3.618	0.000	0.011	
2	16:26:46	0.006	0.149	0.263	-0.787	0.077	-5.428	0.000	0.015	
3	16:27:13	-0.013	0.299	0.268	-0.398	0.603	-2.959	0.000	0.018	
X		0.012	0.222	0.314	-0.575	0.514	-4.002	0.000	0.014	
		$\sigma$	0.028	0.075	0.083	0.197	0.400	1.279	0.000	0.003
		%RSD	238.500	33.890	26.510	34.210	77.860	31.950	0.000	24.080
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:26:19	100.589%	-0.447	-0.451	94.459%	-0.014	-0.019	0.004	-2.317	
2	16:26:46	104.593%	-0.404	-0.393	96.489%	-0.017	-0.008	0.010	-2.319	
3	16:27:13	102.802%	-0.281	-0.430	95.330%	-0.008	-0.002	-0.002	5.738	
X		102.661%	-0.378	-0.425	95.426%	-0.013	-0.010	0.004	0.367	
		$\sigma$	2.006%	0.086	0.029	1.018%	0.005	0.009	0.006	4.651
		%RSD	1.954	22.860	6.916	1.067	34.310	90.020	136.200	1266.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:26:19	95.012%	0.052	0.024	0.023	0.022	0.026	95.485%	95.553%	
2	16:26:46	96.622%	0.061	0.017	0.023	0.021	-0.002	98.258%	98.225%	
3	16:27:13	94.033%	0.024	0.034	0.045	0.011	0.040	95.747%	95.909%	
X		95.222%	0.045	0.025	0.030	0.018	0.022	96.497%	96.563%	
		$\sigma$	1.308%	0.019	0.009	0.013	0.006	0.021	1.531%	1.451%
		%RSD	1.373	42.600	34.040	41.910	36.100	99.300	1.587	1.502
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	16:26:19	0.002	-0.001	-0.001	-0.007	-0.003	99.436%			
2	16:26:46	-0.001	0.002	0.002	-0.006	0.000	99.659%			
3	16:27:13	-0.001	0.000	-0.000	-0.002	-0.001	97.405%			
X		0.000	0.000	0.000	-0.005	-0.001	98.834%			
		$\sigma$	0.002	0.001	0.002	0.002	1.242%			
		%RSD	5286.000	471.300	1503.000	54.170	174.600	1.256		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:30:35	79.537%	47.090	947.400	972.500	0.000	47080.000	45260.000	45330.000	
2	16:31:02	86.076%	45.190	915.800	930.400	0.000	45590.000	44680.000	45250.000	
3	16:31:29	85.648%	45.860	915.000	965.600	0.000	46200.000	45440.000	45690.000	
X		83.754%	46.050	926.100	956.200	0.000	46290.000	45130.000	45430.000	
		σ	3.658%	0.961	18.510	22.560	0.000	749.300	398.900	235.100
		%RSD	4.367	2.087	1.998	2.360	0.000	1.619	0.884	0.518
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:30:35	1895.000	9734.000	0.000	48350.000	47360.000	46610.000	72.211%	989.900	
2	16:31:02	1899.000	9565.000	0.000	48410.000	48300.000	48230.000	74.331%	1004.000	
3	16:31:29	1933.000	9683.000	0.000	49540.000	50600.000	48920.000	74.046%	1030.000	
X		1909.000	9661.000	0.000	48760.000	48750.000	47920.000	73.529%	1008.000	
		σ	20.620	86.600	0.000	668.600	1671.000	1.151%	20.460	
		%RSD	1.080	0.896	0.000	1.371	3.427	2.474	1.565	2.030
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:30:35	503.700	196.900	456.200	1018.000	1096.000	501.800	499.600	255.600	
2	16:31:02	506.000	199.600	463.600	1046.000	1102.000	513.200	512.200	257.500	
3	16:31:29	519.200	203.500	472.400	1063.000	1118.000	517.900	510.200	258.300	
X		509.600	200.000	464.100	1042.000	1105.000	511.000	507.300	257.100	
		σ	8.410	3.294	8.067	22.420	11.440	8.305	6.756	1.410
		%RSD	1.650	1.647	1.738	2.151	1.034	1.625	1.332	0.548
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:30:35	252.800	475.100	469.800	38.420	11.370	9.137	0.000	1002.000	
2	16:31:02	258.000	488.400	485.700	41.380	9.241	9.151	0.000	1022.000	
3	16:31:29	260.200	490.700	486.900	40.560	10.140	8.543	0.000	1021.000	
X		257.000	484.700	480.800	40.120	10.250	8.944	0.000	1015.000	
		σ	3.780	8.404	9.544	1.530	1.071	0.347	0.000	10.940
		%RSD	1.471	1.734	1.985	3.814	10.440	3.878	0.000	1.077
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:30:35	71.935%	1015.000	1025.000	73.296%	50.940	50.600	50.800	36.880	
2	16:31:02	73.417%	1051.000	1062.000	75.061%	51.310	50.670	52.190	37.190	
3	16:31:29	74.926%	1075.000	1076.000	75.424%	50.930	51.970	53.120	36.640	
X		73.426%	1047.000	1054.000	74.594%	51.060	51.080	52.040	36.900	
		σ	1.495%	30.180	26.310	1.139%	0.218	0.772	1.168	0.278
		%RSD	2.037	2.883	2.495	1.526	0.427	1.511	2.245	0.754
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	16:30:35	71.698%	2108.000	502.800	507.200	1971.000	2048.000	76.425%	76.479%	
2	16:31:02	72.175%	2184.000	517.700	524.500	2026.000	2098.000	77.685%	78.260%	
3	16:31:29	72.090%	2234.000	531.800	532.000	2044.000	2143.000	78.879%	80.291%	
X		71.988%	2175.000	517.400	521.200	2014.000	2096.000	77.663%	78.343%	
		σ	0.254%	63.340	14.530	12.710	38.470	47.470	1.227%	1.907%
		%RSD	0.353	2.912	2.809	2.439	1.910	2.264	1.580	2.434
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	16:30:35	50.120	48.090	20.170	20.480	20.420	75.105%			
2	16:31:02	50.440	47.840	20.680	20.210	20.370	78.662%			
3	16:31:29	53.190	51.390	21.960	21.670	21.460	75.079%			
X		51.250	49.110	20.940	20.790	20.750	76.282%			
		σ	1.684	1.982	0.923	0.775	0.614	2.061%		
		%RSD	3.286	4.036	4.406	3.728	2.958	2.702		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:52	84.697%	0.118	42.140	45.000	0.000	75950.000	26650.000	26650.000
2	16:35:18	85.935%	0.075	43.670	44.180	0.000	76910.000	27190.000	27470.000
3	16:35:45	86.067%	0.176	45.170	46.900	0.000	77220.000	27570.000	27650.000
X		85.567%	0.123	43.660	45.360	0.000	76690.000	27140.000	27260.000
σ		0.756%	0.051	1.514	1.394	0.000	663.400	463.300	529.900
%RSD		0.883	41.220	3.468	3.074	0.000	0.865	1.707	1.944
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:52	2.760	4006.000	0.000	30550.000	112900.000	114900.000	72.460%	2.937
2	16:35:18	2.416	4130.000	0.000	32030.000	120100.000	121000.000	72.607%	3.035
3	16:35:45	2.669	4110.000	0.000	32460.000	120800.000	120300.000	72.555%	2.114
X		2.615	4082.000	0.000	31680.000	117900.000	118800.000	72.541%	2.695
σ		0.178	66.880	0.000	1000.000	4394.000	3309.000	0.075%	0.506
%RSD		6.810	1.638	0.000	3.157	3.727	2.787	0.103	18.760
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:52	0.841	12.240	4.159	16.140	531.600	0.347	0.397	4.977
2	16:35:18	-0.608	12.980	4.341	14.990	515.500	0.332	0.492	5.445
3	16:35:45	2.039	12.790	4.313	14.610	497.000	0.276	0.080	5.296
X		0.757	12.670	4.271	15.240	514.700	0.318	0.323	5.239
σ		1.325	0.382	0.098	0.794	17.280	0.038	0.216	0.239
%RSD		175.000	3.012	2.304	5.210	3.357	11.840	66.760	4.565
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:52	4.467	59.610	61.470	-0.913	1.201	2.218	0.000	258.200
2	16:35:18	4.966	62.660	62.340	-0.226	-1.008	1.941	0.000	264.200
3	16:35:45	5.119	62.760	65.390	-1.002	-0.619	-0.858	0.000	266.700
X		4.851	61.680	63.070	-0.713	-0.142	1.100	0.000	263.000
σ		0.341	1.793	2.061	0.425	1.179	1.702	0.000	4.340
%RSD		7.024	2.908	3.267	59.520	832.100	154.700	0.000	1.650
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:52	72.038%	5.009	5.117	72.015%	0.026	0.010	0.000	-2.262
2	16:35:18	73.228%	3.923	4.007	72.334%	0.029	0.031	0.015	-2.302
3	16:35:45	73.372%	3.171	2.971	73.279%	0.045	0.059	0.030	-2.335
X		72.879%	4.034	4.032	72.543%	0.033	0.033	0.015	-2.300
σ		0.733%	0.924	1.073	0.657%	0.010	0.024	0.015	0.036
%RSD		1.005	22.910	26.610	0.906	31.090	73.970	98.250	1.585
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:34:52	72.069%	6.014	0.348	0.332	105.500	104.700	77.311%	78.011%
2	16:35:18	71.774%	4.784	0.335	0.416	108.800	111.100	78.894%	78.465%
3	16:35:45	71.392%	3.796	0.360	0.400	110.800	111.000	78.216%	79.405%
X		71.745%	4.865	0.348	0.383	108.400	108.900	78.140%	78.627%
σ		0.339%	1.111	0.013	0.044	2.670	3.667	0.795%	0.711%
%RSD		0.473	22.840	3.664	11.620	2.464	3.366	1.017	0.904
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:34:52	0.213	0.194	1.071	1.190	1.081	76.056%		
2	16:35:18	0.116	0.115	1.258	1.194	1.209	72.610%		
3	16:35:45	0.103	0.071	1.256	1.235	1.237	72.777%		
X		0.144	0.126	1.195	1.206	1.176	73.814%		
σ		0.060	0.062	0.107	0.025	0.083	1.943%		
%RSD		41.770	49.330	8.979	2.039	7.051	2.632		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:45	83.158%	0.120	44.530	47.820	0.000	87920.000	24430.000	24710.000
2	16:39:12	84.895%	0.076	48.330	49.530	0.000	88940.000	23920.000	24050.000
3	16:39:38	86.449%	0.156	45.530	50.930	0.000	89420.000	25520.000	25820.000
X		84.834%	0.117	46.130	49.420	0.000	88760.000	24630.000	24860.000
σ		1.646%	0.040	1.969	1.558	0.000	762.700	819.300	897.300
%RSD		1.940	33.890	4.268	3.152	0.000	0.859	3.327	3.610
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:45	8.358	4638.000	0.000	29420.000	142100.000	144700.000	71.254%	3.334
2	16:39:12	7.837	4682.000	0.000	30180.000	148700.000	147900.000	72.836%	3.512
3	16:39:38	7.074	4711.000	0.000	30750.000	151300.000	150800.000	72.249%	3.735
X		7.756	4677.000	0.000	30110.000	147400.000	147800.000	72.113%	3.527
σ		0.646	36.990	0.000	666.700	4741.000	3063.000	0.800%	0.201
%RSD		8.323	0.791	0.000	2.214	3.217	2.072	1.109	5.695
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:45	2.090	25.020	177.400	130.800	753.100	0.648	13.920	16.740
2	16:39:12	0.517	25.520	186.300	135.000	739.300	0.711	14.290	17.600
3	16:39:38	1.000	25.320	187.200	137.600	737.200	0.653	14.710	17.780
X		1.202	25.290	183.600	134.400	743.200	0.670	14.310	17.370
σ		0.806	0.252	5.384	3.411	8.643	0.035	0.393	0.558
%RSD		67.040	0.997	2.932	2.537	1.163	5.190	2.749	3.210
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:45	16.360	28.600	29.280	-0.501	-1.046	-0.137	0.000	429.800
2	16:39:12	16.960	30.990	29.350	-2.642	-0.635	-0.163	0.000	451.900
3	16:39:38	17.150	29.510	29.300	1.538	0.136	0.076	0.000	451.100
X		16.820	29.700	29.310	-0.535	-0.515	-0.075	0.000	444.200
σ		0.413	1.204	0.037	2.090	0.600	0.131	0.000	12.520
%RSD		2.458	4.055	0.126	390.900	116.500	175.500	0.000	2.818
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:45	70.968%	0.261	0.270	71.553%	0.066	0.086	0.016	-2.237
2	16:39:12	72.449%	0.272	0.325	73.807%	0.066	0.095	0.030	-2.237
3	16:39:38	73.461%	0.259	0.171	73.786%	0.041	0.057	0.059	-2.279
X		72.293%	0.264	0.255	73.048%	0.058	0.080	0.035	-2.251
σ		1.254%	0.007	0.078	1.295%	0.015	0.020	0.022	0.025
%RSD		1.734	2.704	30.530	1.773	25.730	24.870	63.380	1.090
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:38:45	69.885%	1.311	0.189	0.247	115.200	116.500	77.902%	77.650%
2	16:39:12	71.850%	1.419	0.211	0.294	119.300	120.000	78.951%	79.733%
3	16:39:38	72.657%	1.451	0.234	0.320	118.600	119.600	79.955%	80.971%
X		71.464%	1.394	0.211	0.287	117.700	118.700	78.936%	79.451%
σ		1.426%	0.073	0.023	0.037	2.170	1.929	1.026%	1.678%
%RSD		1.995	5.255	10.700	12.780	1.844	1.625	1.300	2.112
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:38:45	0.064	0.041	1.893	1.653	1.764	76.280%		
2	16:39:12	0.038	0.052	1.980	1.744	1.822	75.991%		
3	16:39:38	0.048	0.049	1.969	1.713	1.851	77.401%		
X		0.050	0.047	1.947	1.703	1.812	76.557%		
σ		0.013	0.005	0.047	0.046	0.044	0.745%		
%RSD		26.510	11.340	2.427	2.712	2.445	0.973		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:00	82.231%	0.058	36.030	38.400	0.000	45750.000	7366.000	7311.000
2	16:43:27	85.833%	0.096	33.750	38.070	0.000	46350.000	7581.000	7557.000
3	16:43:54	86.976%	0.134	31.840	37.770	0.000	45440.000	7450.000	7465.000
X		85.013%	0.096	33.870	38.080	0.000	45850.000	7466.000	7444.000
σ		2.476%	0.038	2.098	0.315	0.000	462.200	108.300	124.000
%RSD		2.913	39.800	6.194	0.827	0.000	1.008	1.451	1.665
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:00	18.410	2793.000	0.000	7710.000	70310.000	70060.000	71.565%	2.490
2	16:43:27	17.050	2821.000	0.000	7924.000	73400.000	74240.000	71.776%	3.052
3	16:43:54	17.470	2784.000	0.000	7821.000	71940.000	71330.000	76.140%	2.833
X		17.640	2799.000	0.000	7818.000	71880.000	71880.000	73.160%	2.792
σ		0.701	19.580	0.000	107.200	1544.000	2146.000	2.583%	0.283
%RSD		3.974	0.700	0.000	1.371	2.148	2.986	3.530	10.150
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:00	2.360	4.137	164.600	132.900	424.200	5.255	4.291	206.200
2	16:43:27	0.312	4.185	171.800	140.500	434.000	5.614	4.788	215.100
3	16:43:54	0.770	4.165	168.700	132.700	412.500	5.475	5.134	214.000
X		1.147	4.162	168.400	135.300	423.600	5.448	4.738	211.800
σ		1.075	0.024	3.612	4.443	10.800	0.181	0.424	4.839
%RSD		93.680	0.571	2.145	3.283	2.550	3.325	8.944	2.285
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:00	203.600	333.600	335.400	1.076	-1.832	-2.432	0.000	162.200
2	16:43:27	213.200	340.600	343.300	-2.934	-1.722	-1.630	0.000	165.400
3	16:43:54	212.600	341.800	348.900	0.118	-0.353	0.884	0.000	169.300
X		209.800	338.600	342.500	-0.580	-1.303	-1.059	0.000	165.700
σ		5.356	4.444	6.746	2.094	0.824	1.730	0.000	3.577
%RSD		2.553	1.312	1.969	361.100	63.270	163.400	0.000	2.160
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:00	70.979%	0.443	0.398	73.751%	0.034	0.022	0.089	-2.267
2	16:43:27	73.072%	0.471	0.438	75.285%	0.053	0.045	0.109	-2.324
3	16:43:54	73.504%	0.379	0.320	75.672%	0.017	0.050	0.109	-2.205
X		72.519%	0.431	0.385	74.903%	0.035	0.039	0.102	-2.265
σ		1.351%	0.047	0.060	1.016%	0.018	0.015	0.011	0.059
%RSD		1.862	10.890	15.560	1.356	51.730	37.380	10.930	2.625
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:00	71.855%	1.111	0.351	0.401	51.480	52.240	77.332%	77.856%
2	16:43:27	73.690%	1.125	0.381	0.393	51.470	52.700	79.842%	80.073%
3	16:43:54	73.789%	1.249	0.404	0.467	52.610	53.280	81.442%	81.168%
X		73.111%	1.162	0.379	0.420	51.860	52.740	79.539%	79.699%
σ		1.089%	0.076	0.027	0.040	0.656	0.520	2.071%	1.687%
%RSD		1.489	6.541	7.061	9.628	1.265	0.987	2.604	2.117
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:43:00	0.019	0.019	28.670	25.340	26.700	76.469%		
2	16:43:27	0.018	0.026	28.100	25.440	26.500	81.285%		
3	16:43:54	0.019	0.016	30.400	27.140	28.500	77.958%		
X		0.019	0.020	29.060	25.980	27.230	78.571%		
σ		0.001	0.005	1.200	1.014	1.099	2.465%		
%RSD		3.194	25.180	4.129	3.902	4.037	3.138		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:18	82.490%	0.037	79.130	83.330	0.000	65120.000	13540.000	13680.000
2	16:47:45	83.616%	0.078	81.010	88.040	0.000	65850.000	13910.000	14070.000
3	16:48:11	84.791%	0.077	85.850	87.530	0.000	66390.000	14090.000	14140.000
X		83.632%	0.064	82.000	86.300	0.000	65790.000	13850.000	13970.000
σ		1.151%	0.023	3.468	2.585	0.000	640.300	278.000	247.700
%RSD		1.376	36.790	4.229	2.995	0.000	0.973	2.007	1.773
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:18	12.180	4036.000	0.000	13040.000	126100.000	128200.000	69.449%	1.910
2	16:47:45	13.740	4064.000	0.000	13420.000	131300.000	130200.000	70.243%	2.408
3	16:48:11	12.560	4063.000	0.000	13590.000	130500.000	129500.000	71.002%	1.873
X		12.830	4055.000	0.000	13350.000	129300.000	129300.000	70.231%	2.063
σ		0.813	15.830	0.000	282.300	2773.000	1020.000	0.777%	0.299
%RSD		6.334	0.391	0.000	2.115	2.144	0.789	1.106	14.500
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:18	1.372	39.710	32.380	43.850	584.500	0.839	16.640	4.810
2	16:47:45	1.560	39.650	33.900	44.140	572.900	0.935	16.960	5.034
3	16:48:11	0.139	39.800	33.610	44.890	562.900	1.028	16.630	5.020
X		1.024	39.720	33.290	44.290	573.400	0.934	16.740	4.955
σ		0.772	0.078	0.807	0.539	10.810	0.095	0.186	0.126
%RSD		75.400	0.195	2.423	1.217	1.885	10.120	1.108	2.535
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:18	5.061	18.020	17.500	1.075	-0.033	-0.382	0.000	230.600
2	16:47:45	4.448	19.260	18.680	1.323	-1.490	0.318	0.000	234.700
3	16:48:11	4.519	18.980	18.370	-0.417	-1.487	-0.610	0.000	239.000
X		4.676	18.750	18.180	0.661	-1.003	-0.225	0.000	234.800
σ		0.336	0.648	0.608	0.942	0.840	0.483	0.000	4.229
%RSD		7.175	3.454	3.345	142.600	83.730	215.100	0.000	1.801
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:18	70.358%	-0.058	-0.068	70.448%	0.003	0.019	0.108	-2.182
2	16:47:45	72.181%	0.082	-0.002	72.741%	0.042	0.041	0.106	-2.207
3	16:48:11	73.528%	0.031	0.066	74.661%	0.013	0.040	0.140	-2.169
X		72.022%	0.018	-0.001	72.617%	0.020	0.033	0.118	-2.186
σ		1.591%	0.071	0.067	2.109%	0.021	0.012	0.019	0.019
%RSD		2.209	391.500	4565.000	2.905	105.200	36.750	15.900	0.885
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:47:18	69.736%	0.598	0.143	0.196	59.890	60.910	78.776%	77.328%
2	16:47:45	70.468%	0.665	0.132	0.174	61.030	62.730	78.723%	79.121%
3	16:48:11	72.661%	0.738	0.138	0.182	61.190	61.840	79.418%	81.177%
X		70.955%	0.667	0.138	0.184	60.700	61.820	78.972%	79.209%
σ		1.522%	0.070	0.006	0.011	0.710	0.910	0.387%	1.926%
%RSD		2.145	10.500	4.021	6.083	1.170	1.471	0.490	2.431
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:47:18	0.017	0.018	0.939	0.899	0.969	74.208%		
2	16:47:45	0.025	0.027	1.071	0.902	1.018	75.287%		
3	16:48:11	0.012	0.025	1.050	1.019	1.018	77.794%		
X		0.018	0.023	1.020	0.940	1.002	75.763%		
σ		0.007	0.005	0.071	0.068	0.028	1.840%		
%RSD		37.350	20.370	6.937	7.267	2.799	2.428		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:38	81.218%	0.080	37.210	35.090	0.000	52040.000	18530.000	18700.000
2	16:52:04	83.103%	0.099	30.420	38.660	0.000	52210.000	18940.000	19050.000
3	16:52:30	81.987%	0.079	32.340	38.920	0.000	52900.000	19310.000	19470.000
X		82.103%	0.086	33.320	37.550	0.000	52380.000	18930.000	19070.000
σ		0.948%	0.011	3.503	2.142	0.000	455.200	392.800	384.700
%RSD		1.155	13.190	10.510	5.703	0.000	0.869	2.075	2.017
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:38	38.140	4408.000	0.000	6772.000	93490.000	93350.000	69.936%	3.048
2	16:52:04	28.010	4453.000	0.000	6922.000	96600.000	96730.000	69.714%	2.179
3	16:52:30	28.480	4494.000	0.000	6909.000	97600.000	96990.000	71.278%	2.500
X		31.540	4452.000	0.000	6868.000	95900.000	95690.000	70.309%	2.576
σ		5.718	42.710	0.000	82.890	2142.000	2030.000	0.846%	0.440
%RSD		18.130	0.959	0.000	1.207	2.234	2.122	1.203	17.070
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:38	1.302	23.480	28.070	191.300	569.000	0.321	20.810	64.850
2	16:52:04	1.695	24.100	29.210	199.200	591.900	0.296	20.720	66.420
3	16:52:30	-0.304	23.920	28.500	195.600	570.300	0.370	21.220	65.900
X		0.898	23.830	28.590	195.400	577.100	0.329	20.920	65.720
σ		1.059	0.317	0.577	3.984	12.870	0.037	0.264	0.801
%RSD		118.000	1.331	2.018	2.039	2.231	11.380	1.264	1.218
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:38	64.860	234.200	236.900	-0.747	-0.961	-0.264	0.000	277.000
2	16:52:04	64.050	243.700	244.600	1.038	-0.745	-2.831	0.000	275.000
3	16:52:30	64.820	243.200	244.400	0.249	-2.231	-0.659	0.000	282.500
X		64.580	240.400	242.000	0.180	-1.312	-1.252	0.000	278.200
σ		0.458	5.385	4.395	0.895	0.803	1.382	0.000	3.876
%RSD		0.708	2.240	1.816	496.600	61.200	110.400	0.000	1.393
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:38	69.532%	-0.334	-0.395	71.194%	0.001	0.019	0.023	-2.273
2	16:52:04	72.084%	-0.290	-0.395	71.966%	0.019	-0.013	0.023	-2.226
3	16:52:30	72.091%	-0.266	-0.275	71.917%	0.015	0.021	0.023	-2.362
X		71.236%	-0.297	-0.355	71.693%	0.011	0.009	0.023	-2.287
σ		1.476%	0.034	0.069	0.432%	0.010	0.019	0.000	0.069
%RSD		2.072	11.560	19.510	0.603	83.640	206.400	0.945	3.016
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:51:38	70.564%	0.792	0.082	0.146	63.030	63.470	77.555%	77.112%
2	16:52:04	71.055%	0.910	0.162	0.193	63.700	64.750	77.568%	79.209%
3	16:52:30	71.733%	0.932	0.122	0.169	64.550	67.160	78.023%	79.029%
X		71.117%	0.878	0.122	0.170	63.760	65.130	77.715%	78.450%
σ		0.587%	0.075	0.040	0.024	0.763	1.876	0.266%	1.162%
%RSD		0.825	8.564	33.050	13.920	1.196	2.881	0.343	1.481
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:51:38	0.012	0.022	7.521	6.941	7.113	74.691%		
2	16:52:04	0.021	0.021	7.656	6.894	7.243	75.865%		
3	16:52:30	0.017	0.017	7.459	6.798	7.015	79.909%		
X		0.017	0.020	7.545	6.878	7.124	76.822%		
σ		0.005	0.003	0.101	0.073	0.114	2.737%		
%RSD		27.350	12.770	1.335	1.062	1.604	3.563		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:56	85.244%	0.056	13.420	11.230	0.000	-1.343	2.932	4.965
2	16:56:22	83.058%	0.141	12.650	12.410	0.000	-1.945	3.451	5.581
3	16:56:48	86.378%	0.156	13.570	12.000	0.000	-8.707	4.944	4.950
X		84.894%	0.117	13.210	11.880	0.000	-3.998	3.775	5.165
σ		1.688%	0.054	0.496	0.601	0.000	4.089	1.045	0.360
%RSD		1.988	45.880	3.752	5.062	0.000	102.300	27.670	6.967
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:56	5.659	15.530	0.000	-14.480	72.820	93.690	70.233%	1.485
2	16:56:22	6.216	15.750	0.000	-8.781	64.020	89.940	70.989%	1.347
3	16:56:48	6.207	13.750	0.000	-17.570	94.790	94.060	73.327%	1.598
X		6.027	15.010	0.000	-13.610	77.210	92.560	71.517%	1.477
σ		0.319	1.097	0.000	4.460	15.850	2.276	1.613%	0.126
%RSD		5.295	7.311	0.000	32.770	20.530	2.459	2.256	8.502
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:56	0.860	2.386	0.301	-1.027	9.218	0.028	2.537	1.469
2	16:56:22	0.909	2.401	0.312	-0.652	5.820	0.009	2.754	1.563
3	16:56:48	1.003	2.400	0.272	-3.037	4.576	0.045	2.557	1.464
X		0.924	2.396	0.295	-1.572	6.538	0.027	2.616	1.499
σ		0.073	0.008	0.021	1.283	2.403	0.018	0.120	0.056
%RSD		7.883	0.348	7.165	81.610	36.750	66.660	4.586	3.730
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:56	1.509	3.162	3.414	-0.604	-1.685	-1.458	0.000	0.150
2	16:56:22	1.445	3.307	3.258	0.599	-1.629	-0.541	0.000	0.137
3	16:56:48	1.219	3.418	3.051	0.990	0.516	-0.029	0.000	0.128
X		1.391	3.296	3.241	0.328	-0.933	-0.676	0.000	0.138
σ		0.153	0.129	0.182	0.831	1.255	0.724	0.000	0.011
%RSD		10.960	3.909	5.625	253.200	134.600	107.100	0.000	8.007
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:56	70.950%	-0.555	-0.595	73.946%	-0.016	0.003	-0.007	-2.305
2	16:56:22	72.872%	-0.542	-0.573	76.891%	0.010	-0.006	-0.007	-2.277
3	16:56:48	74.625%	-0.512	-0.607	78.943%	0.004	0.008	0.014	-2.244
X		72.816%	-0.536	-0.592	76.593%	-0.000	0.002	-0.000	-2.275
σ		1.838%	0.022	0.018	2.511%	0.014	0.007	0.012	0.031
%RSD		2.524	4.056	2.969	3.279	5804.000	414.700	5623.000	1.348
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:56	72.343%	0.328	0.051	0.117	0.049	0.078	77.558%	77.099%
2	16:56:22	70.832%	0.479	0.050	0.081	0.072	0.126	79.175%	79.123%
3	16:56:48	75.992%	0.462	0.046	0.096	0.089	0.065	81.009%	82.575%
X		73.055%	0.423	0.049	0.098	0.070	0.090	79.247%	79.599%
σ		2.653%	0.083	0.003	0.018	0.020	0.032	1.727%	2.769%
%RSD		3.631	19.560	5.872	18.470	28.860	35.960	2.179	3.479
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:55:56	0.004	0.005	0.023	0.017	0.019	81.199%		
2	16:56:22	0.001	0.001	0.023	0.011	0.019	81.014%		
3	16:56:48	0.005	0.003	0.020	0.024	0.027	84.408%		
X		0.003	0.003	0.022	0.018	0.021	82.207%		
σ		0.002	0.002	0.002	0.006	0.005	1.909%		
%RSD		63.900	67.930	7.178	36.260	21.850	2.322		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:12	79.312%	0.038	63.240	58.950	0.000	45890.000	36290.000	36580.000
2	17:00:39	79.108%	0.104	58.870	63.710	0.000	47210.000	37460.000	37760.000
3	17:01:05	82.455%	0.037	59.080	63.180	0.000	46830.000	37720.000	37630.000
X		80.292%	0.060	60.400	61.940	0.000	46640.000	37160.000	37330.000
σ		1.876%	0.039	2.463	2.609	0.000	680.000	762.100	644.100
%RSD		2.336	64.560	4.079	4.212	0.000	1.458	2.051	1.726
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:12	1.589	4065.000	0.000	7518.000	104900.000	104700.000	68.577%	0.654
2	17:00:39	1.614	4162.000	0.000	7665.000	107400.000	107400.000	68.671%	1.052
3	17:01:05	2.060	4145.000	0.000	7783.000	110500.000	110300.000	68.341%	0.945
X		1.754	4124.000	0.000	7655.000	107600.000	107500.000	68.530%	0.884
σ		0.265	51.610	0.000	132.400	2818.000	2773.000	0.170%	0.206
%RSD		15.120	1.251	0.000	1.730	2.618	2.580	0.248	23.300
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:12	1.026	2.334	248.200	819.800	1161.000	1.613	1.579	1.518
2	17:00:39	0.823	2.186	259.700	855.200	1221.000	1.656	1.492	1.417
3	17:01:05	2.459	2.125	262.200	864.500	1218.000	1.771	1.304	1.593
X		1.436	2.215	256.700	846.500	1200.000	1.680	1.458	1.509
σ		0.892	0.108	7.440	23.620	33.400	0.082	0.140	0.089
%RSD		62.120	4.859	2.898	2.790	2.783	4.884	9.627	5.878
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:12	1.653	2.269	2.266	0.971	-1.349	-0.416	0.000	273.400
2	17:00:39	1.425	2.313	1.948	1.946	-0.653	0.710	0.000	284.000
3	17:01:05	1.797	2.099	2.176	1.192	-1.181	-0.526	0.000	280.600
X		1.625	2.227	2.130	1.370	-1.061	-0.077	0.000	279.300
σ		0.187	0.113	0.164	0.511	0.363	0.684	0.000	5.382
%RSD		11.530	5.080	7.694	37.310	34.250	884.600	0.000	1.927
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:12	68.044%	0.169	0.020	69.166%	-0.005	-0.007	0.001	-2.211
2	17:00:39	69.540%	0.067	-0.055	70.514%	-0.000	0.024	0.008	-2.277
3	17:01:05	70.706%	0.185	0.089	70.579%	-0.005	0.002	0.008	-2.353
X		69.430%	0.140	0.018	70.087%	-0.003	0.006	0.006	-2.280
σ		1.334%	0.064	0.072	0.798%	0.003	0.016	0.004	0.071
%RSD		1.922	45.790	398.300	1.138	77.250	259.900	76.000	3.131
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:00:12	67.440%	0.370	0.082	0.082	47.180	46.580	75.293%	75.855%
2	17:00:39	68.429%	0.368	0.096	0.093	47.630	47.650	77.039%	77.281%
3	17:01:05	69.821%	0.404	0.084	0.133	46.880	47.950	78.248%	77.746%
X		68.564%	0.381	0.087	0.103	47.230	47.390	76.860%	76.961%
σ		1.196%	0.020	0.008	0.027	0.377	0.721	1.486%	0.985%
%RSD		1.745	5.303	8.811	26.190	0.798	1.522	1.933	1.280
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:00:12	0.034	0.032	0.005	0.004	0.017	74.515%		
2	17:00:39	0.037	0.033	0.019	0.035	0.024	75.371%		
3	17:01:05	0.035	0.028	0.028	0.009	0.019	75.953%		
X		0.035	0.031	0.017	0.016	0.020	75.280%		
σ		0.002	0.002	0.011	0.017	0.004	0.723%		
%RSD		4.654	7.657	65.640	103.600	18.870	0.961		

CCV 1467888 1/29/2015 5:04:04 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:31	78.294%	94.820	97.630	94.880	0.000	47650.000	46580.000	46880.000
2	17:04:57	77.936%	99.450	94.570	99.460	0.000	48640.000	47840.000	47990.000
3	17:05:24	79.893%	97.860	96.560	99.660	0.000	48260.000	47430.000	47670.000
X		78.708%	97.374%	96.254%	97.997%	0.000	96.366%	94.566%	95.026%
σ		1.042%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.324	2.414	1.610	2.757	0.000	1.030	1.358	1.199
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:31	462.200	5316.000	0.000	50100.000	48670.000	47990.000	74.163%	102.200
2	17:04:57	473.300	5420.000	0.000	50310.000	49350.000	49430.000	74.613%	102.000
3	17:05:24	470.000	5071.000	0.000	50460.000	49850.000	49750.000	74.202%	98.200
X		93.701%	105.381%	0.000	100.585%	98.584%	98.112%	74.326%	100.812%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.249%	n/a
%RSD		1.209	3.403	0.000	0.363	1.202	1.916	0.335	2.242
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:31	95.510	94.840	458.800	24740.000	22990.000	97.100	99.420	99.290
2	17:04:57	96.800	97.630	470.000	25170.000	23480.000	98.980	100.100	101.300
3	17:05:24	96.260	97.620	469.400	25310.000	23710.000	99.260	100.500	102.000
X		96.188%	96.696%	93.219%	100.292%	93.576%	98.447%	99.981%	100.852%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.673	1.666	1.354	1.181	1.580	1.191	0.528	1.397
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:31	97.910	100.400	99.500	99.790	98.470	100.900	0.000	96.970
2	17:04:57	101.200	102.800	101.100	100.400	95.480	100.800	0.000	97.740
3	17:05:24	102.900	102.700	102.800	101.500	96.390	100.700	0.000	97.790
X		100.680%	101.992%	101.133%	100.590%	96.780%	100.813%	0.000	97.499%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.540	1.314	1.644	0.880	1.582	0.081	0.000	0.469
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:31	72.563%	92.360	89.600	78.004%	98.210	97.850	97.430	93.140
2	17:04:57	74.498%	97.180	94.780	78.233%	99.350	98.490	100.400	97.010
3	17:05:24	74.937%	98.260	98.290	77.835%	98.520	98.810	98.880	97.490
X		73.999%	95.929%	94.222%	78.024%	98.694%	98.383%	98.896%	95.881%
σ		1.263%	n/a	n/a	0.200%	n/a	n/a	n/a	n/a
%RSD		1.707	3.275	4.636	0.256	0.600	0.500	1.489	2.488
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:04:31	75.315%	95.540	94.420	95.630	92.850	95.740	82.542%	82.526%
2	17:04:57	75.702%	98.660	97.260	98.740	94.600	96.590	82.714%	83.431%
3	17:05:24	76.194%	97.680	98.470	99.110	96.780	96.740	82.912%	83.439%
X		75.737%	97.292%	96.719%	97.828%	94.741%	96.358%	82.723%	83.132%
σ		0.441%	n/a	n/a	n/a	n/a	n/a	0.185%	0.525%
%RSD		0.582	1.641	2.152	1.957	2.077	0.561	0.224	0.631
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:04:31	103.400	101.700	104.100	104.000	103.400	76.981%		
2	17:04:57	106.000	104.100	107.000	106.400	106.700	76.971%		
3	17:05:24	107.100	105.400	107.100	107.200	107.400	77.019%		
X		105.477%	103.718%	106.053%	105.881%	105.838%	76.990%		
σ		n/a	n/a	n/a	n/a	n/a	0.025%		
%RSD		1.795	1.780	1.586	1.570	2.014	0.032		

CCB2 1/29/2015 5:11:30 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:56	78.194%	0.148	1.316	0.671	0.000	-80.150	-1.233	0.210
2	17:12:23	81.532%	0.079	-0.242	0.629	0.000	-80.550	-1.208	-0.468
3	17:12:49	83.530%	0.077	-0.248	0.831	0.000	-80.570	0.229	-0.809
X		81.085%	0.101	0.276	0.710	0.000	-80.430	-0.737	-0.356
σ		2.696%	0.041	0.901	0.106	0.000	0.239	0.837	0.519
%RSD		3.324	40.080	326.800	14.970	0.000	0.297	113.600	145.700
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:56	0.464	-1.291	0.000	-43.950	6.683	33.240	75.838%	0.451
2	17:12:23	0.434	-5.566	0.000	-54.150	55.220	33.210	77.294%	0.934
3	17:12:49	0.567	-4.117	0.000	-54.580	20.590	37.000	77.837%	1.300
X		0.488	-3.658	0.000	-50.890	27.490	34.480	76.990%	0.895
σ		0.069	2.174	0.000	6.020	24.990	2.182	1.033%	0.426
%RSD		14.230	59.430	0.000	11.830	90.900	6.327	1.342	47.600
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:56	-0.044	0.008	0.162	-1.435	9.176	0.017	0.100	0.127
2	17:12:23	0.040	0.015	0.164	-3.143	7.191	0.009	-0.057	0.139
3	17:12:49	0.098	-0.062	0.163	-3.455	4.949	0.000	-0.147	0.244
X		0.031	-0.013	0.163	-2.678	7.106	0.009	-0.034	0.170
σ		0.071	0.042	0.001	1.087	2.114	0.009	0.125	0.065
%RSD		229.000	326.200	0.635	40.610	29.760	95.590	362.800	38.200
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:56	0.146	0.455	0.361	-0.197	-0.820	-2.036	0.000	0.027
2	17:12:23	0.053	0.356	0.514	-0.077	-1.728	-1.413	0.000	0.027
3	17:12:49	0.137	0.469	0.488	-0.211	-1.843	-2.318	0.000	0.018
X		0.112	0.427	0.454	-0.161	-1.463	-1.922	0.000	0.024
σ		0.051	0.061	0.082	0.074	0.561	0.463	0.000	0.005
%RSD		45.860	14.370	18.010	45.580	38.310	24.080	0.000	22.320
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:56	75.310%	-0.356	-0.436	80.331%	-0.002	-0.009	0.020	-2.260
2	17:12:23	77.424%	-0.391	-0.420	81.878%	-0.006	0.004	-0.007	-2.261
3	17:12:49	78.614%	-0.330	-0.416	81.791%	0.007	-0.011	-0.001	-2.293
X		77.116%	-0.359	-0.424	81.333%	-0.000	-0.005	0.004	-2.271
σ		1.673%	0.031	0.011	0.869%	0.007	0.008	0.014	0.019
%RSD		2.170	8.530	2.578	1.069	7080.000	154.700	342.600	0.839
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:11:56	77.186%	0.140	0.123	0.119	0.007	0.036	79.609%	81.386%
2	17:12:23	79.512%	0.121	0.132	0.115	-0.009	0.038	82.273%	82.867%
3	17:12:49	80.033%	0.074	0.134	0.116	0.012	0.026	83.457%	83.542%
X		78.911%	0.112	0.130	0.117	0.004	0.033	81.780%	82.598%
σ		1.516%	0.034	0.006	0.002	0.011	0.007	1.971%	1.103%
%RSD		1.921	30.230	4.525	2.126	293.500	20.230	2.410	1.335
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:11:56	0.012	0.005	0.025	0.016	0.019	84.215%		
2	17:12:23	0.014	0.007	0.026	0.007	0.017	85.606%		
3	17:12:49	0.008	0.006	0.014	0.018	0.021	85.551%		
X		0.011	0.006	0.022	0.014	0.019	85.124%		
σ		0.003	0.001	0.006	0.006	0.002	0.787%		
%RSD		27.720	16.970	29.540	42.330	9.028	0.925		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:15	77.563%	0.039	55.620	59.260	0.000	46090.000	36070.000	36210.000
2	17:16:41	78.334%	0.061	59.760	60.430	0.000	46870.000	37370.000	37650.000
3	17:17:08	79.924%	0.082	56.210	59.110	0.000	48150.000	38600.000	38870.000
X		78.607%	0.061	57.200	59.600	0.000	47040.000	37350.000	37580.000
σ		1.204%	0.021	2.239	0.726	0.000	1036.000	1262.000	1329.000
%RSD		1.532	35.080	3.914	1.218	0.000	2.203	3.379	3.538
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:15	3.358	4053.000	0.000	7720.000	101300.000	103000.000	67.168%	1.863
2	17:16:41	3.305	4166.000	0.000	8076.000	107900.000	107500.000	67.814%	1.921
3	17:17:08	3.365	4272.000	0.000	8232.000	112600.000	112300.000	66.179%	2.227
X		3.343	4163.000	0.000	8009.000	107300.000	107600.000	67.054%	2.004
σ		0.033	109.500	0.000	262.400	5677.000	4611.000	0.824%	0.196
%RSD		0.978	2.629	0.000	3.277	5.292	4.284	1.228	9.755
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:15	1.216	2.066	235.200	813.100	1169.000	1.494	1.421	1.517
2	17:16:41	-0.923	2.125	241.100	849.300	1195.000	1.642	1.086	1.571
3	17:17:08	1.349	2.079	255.200	885.300	1242.000	1.614	1.287	1.663
X		0.547	2.090	243.900	849.200	1202.000	1.583	1.265	1.584
σ		1.275	0.031	10.280	36.150	36.840	0.079	0.169	0.074
%RSD		232.900	1.477	4.216	4.257	3.065	4.974	13.340	4.659
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:15	1.777	2.229	2.191	1.186	-1.472	-1.091	0.000	273.600
2	17:16:41	1.504	2.900	2.961	1.250	-0.413	-0.346	0.000	282.000
3	17:17:08	1.576	2.582	2.302	3.223	0.182	0.090	0.000	290.400
X		1.619	2.570	2.485	1.886	-0.568	-0.449	0.000	282.000
σ		0.141	0.336	0.416	1.158	0.838	0.597	0.000	8.392
%RSD		8.722	13.070	16.740	61.390	147.600	133.000	0.000	2.976
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:15	65.961%	0.352	0.291	66.619%	0.014	0.019	0.009	-2.291
2	17:16:41	68.108%	0.341	0.255	69.159%	0.003	0.019	-0.007	-2.244
3	17:17:08	67.741%	0.238	0.257	68.337%	0.010	-0.005	-0.007	-2.286
X		67.270%	0.310	0.268	68.038%	0.009	0.011	-0.002	-2.273
σ		1.149%	0.063	0.020	1.296%	0.006	0.014	0.009	0.026
%RSD		1.708	20.310	7.568	1.905	65.960	127.500	519.000	1.129
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:16:15	66.254%	0.698	0.331	0.323	45.950	45.770	73.732%	73.901%
2	17:16:41	67.293%	0.717	0.269	0.327	47.370	48.240	74.178%	75.658%
3	17:17:08	68.468%	0.719	0.235	0.231	48.690	47.320	74.547%	75.782%
X		67.338%	0.712	0.278	0.294	47.340	47.110	74.153%	75.114%
σ		1.108%	0.011	0.049	0.054	1.373	1.252	0.408%	1.052%
%RSD		1.645	1.616	17.670	18.390	2.900	2.658	0.550	1.401
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:16:15	0.054	0.045	0.030	0.020	0.031	74.349%		
2	17:16:41	0.065	0.061	0.025	0.026	0.021	72.890%		
3	17:17:08	0.058	0.050	0.025	0.016	0.018	76.913%		
X		0.059	0.052	0.027	0.021	0.024	74.717%		
σ		0.005	0.008	0.003	0.005	0.007	2.037%		
%RSD		8.872	15.150	11.890	23.720	28.180	2.726		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:29	75.522%	0.109	70.600	76.990	0.000	38230.000	64570.000	64640.000
2	17:20:55	75.594%	0.132	74.670	81.500	0.000	39630.000	67140.000	67480.000
3	17:21:22	75.153%	0.179	80.040	83.560	0.000	40340.000	68680.000	68940.000
X		75.423%	0.140	75.100	80.680	0.000	39400.000	66800.000	67020.000
σ		0.237%	0.036	4.739	3.358	0.000	1076.000	2079.000	2185.000
%RSD		0.314	25.460	6.309	4.162	0.000	2.731	3.112	3.261
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:29	1.264	3662.000	0.000	13010.000	275000.000	272100.000	65.067%	2.131
2	17:20:55	1.305	3771.000	0.000	13230.000	282700.000	285300.000	66.119%	2.349
3	17:21:22	1.317	3796.000	0.000	13930.000	299300.000	294100.000	64.382%	2.340
X		1.295	3743.000	0.000	13390.000	285600.000	283800.000	65.189%	2.273
σ		0.028	71.490	0.000	480.900	12420.000	11060.000	0.875%	0.124
%RSD		2.155	1.910	0.000	3.592	4.347	3.898	1.342	5.434
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:29	2.478	2.274	2983.000	1183.000	2175.000	2.755	0.803	1.816
2	17:20:55	-0.657	2.066	3099.000	1240.000	2189.000	2.845	1.227	1.801
3	17:21:22	1.456	2.211	3156.000	1283.000	2236.000	2.778	1.252	1.765
X		1.092	2.184	3079.000	1236.000	2200.000	2.792	1.094	1.794
σ		1.599	0.107	88.230	50.240	31.600	0.047	0.252	0.026
%RSD		146.300	4.894	2.865	4.066	1.436	1.679	23.030	1.457
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:29	3.304	3.280	3.072	2.591	-0.404	-0.155	0.000	435.000
2	17:20:55	3.549	3.556	2.952	0.012	0.170	-0.842	0.000	452.800
3	17:21:22	3.703	4.085	2.693	2.259	-0.788	-3.037	0.000	451.600
X		3.519	3.640	2.906	1.621	-0.341	-1.344	0.000	446.500
σ		0.201	0.409	0.194	1.403	0.482	1.505	0.000	9.952
%RSD		5.710	11.240	6.663	86.580	141.500	112.000	0.000	2.229
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:29	66.042%	0.046	-0.077	66.385%	-0.014	-0.012	0.796	-1.418
2	17:20:55	67.862%	0.083	0.043	66.688%	0.014	-0.014	0.756	-1.418
3	17:21:22	68.281%	0.052	0.024	67.355%	0.002	-0.013	0.892	-1.592
X		67.395%	0.060	-0.003	66.810%	0.001	-0.013	0.815	-1.476
σ		1.190%	0.020	0.065	0.496%	0.014	0.001	0.070	0.100
%RSD		1.766	33.170	1960.000	0.743	2373.000	10.330	8.543	6.788
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:20:29	65.423%	0.322	0.196	0.211	30.320	30.510	75.105%	74.200%
2	17:20:55	67.288%	0.427	0.196	0.281	30.530	31.670	75.242%	75.273%
3	17:21:22	67.074%	0.439	0.173	0.222	30.890	32.390	76.829%	76.506%
X		66.595%	0.396	0.188	0.238	30.580	31.530	75.725%	75.327%
σ		1.021%	0.064	0.014	0.038	0.286	0.947	0.959%	1.154%
%RSD		1.533	16.280	7.170	15.920	0.937	3.002	1.266	1.531
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:20:29	0.066	0.056	0.024	0.017	0.021	72.254%		
2	17:20:55	0.053	0.058	0.034	0.025	0.024	77.866%		
3	17:21:22	0.076	0.065	0.020	0.025	0.024	71.064%		
X		0.065	0.059	0.026	0.022	0.023	73.728%		
σ		0.011	0.005	0.007	0.005	0.002	3.633%		
%RSD		17.590	7.628	28.490	22.100	7.452	4.927		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:44	73.934%	0.159	79.310	75.900	0.000	40210.000	67110.000	66550.000
2	17:25:10	73.929%	0.159	83.300	81.930	0.000	41210.000	69490.000	69770.000
3	17:25:36	75.123%	0.087	73.100	81.780	0.000	41060.000	69620.000	69910.000
X		74.329%	0.135	78.570	79.870	0.000	40830.000	68740.000	68740.000
σ		0.688%	0.041	5.140	3.442	0.000	541.400	1416.000	1904.000
%RSD		0.925	30.710	6.541	4.310	0.000	1.326	2.060	2.770
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:44	104.400	3822.000	0.000	13040.000	279600.000	281700.000	64.008%	3.322
2	17:25:10	106.800	3933.000	0.000	13620.000	301200.000	298700.000	63.605%	2.569
3	17:25:36	107.700	3927.000	0.000	13870.000	303800.000	301200.000	63.287%	4.046
X		106.300	3894.000	0.000	13510.000	294900.000	293900.000	63.633%	3.312
σ		1.706	62.340	0.000	425.700	13300.000	10630.000	0.361%	0.739
%RSD		1.605	1.601	0.000	3.152	4.510	3.618	0.567	22.300
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:44	-0.867	2.298	3077.000	1489.000	2445.000	2.756	1.906	1.624
2	17:25:10	0.270	2.428	3198.000	1576.000	2506.000	2.860	1.647	1.679
3	17:25:36	1.774	2.251	3270.000	1614.000	2508.000	2.940	1.690	1.715
X		0.392	2.326	3182.000	1560.000	2486.000	2.852	1.748	1.673
σ		1.325	0.092	97.190	63.700	35.600	0.092	0.139	0.046
%RSD		337.900	3.949	3.054	4.084	1.432	3.233	7.951	2.727
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:44	3.213	5.503	4.675	2.378	0.223	0.399	0.000	452.800
2	17:25:10	3.238	5.245	4.924	-0.236	-1.402	-3.575	0.000	462.500
3	17:25:36	3.592	5.493	4.484	5.618	-0.468	2.777	0.000	472.200
X		3.348	5.414	4.694	2.587	-0.549	-0.133	0.000	462.500
σ		0.212	0.146	0.220	2.933	0.815	3.209	0.000	9.691
%RSD		6.330	2.698	4.693	113.400	148.500	2420.000	0.000	2.096
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:44	64.461%	-0.171	-0.022	64.401%	-0.009	-0.011	5.824	3.221
2	17:25:10	65.945%	0.002	-0.099	64.844%	-0.025	0.010	6.224	4.165
3	17:25:36	66.250%	0.024	-0.075	65.311%	-0.015	-0.009	6.005	3.605
X		65.552%	-0.048	-0.065	64.852%	-0.016	-0.004	6.018	3.663
σ		0.957%	0.107	0.039	0.455%	0.008	0.012	0.200	0.475
%RSD		1.460	220.900	60.520	0.702	50.620	323.400	3.324	12.950
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:44	65.567%	0.248	0.102	0.123	30.340	30.800	72.569%	73.644%
2	17:25:10	64.395%	0.289	0.077	0.136	32.000	32.350	73.296%	73.293%
3	17:25:36	64.859%	0.300	0.066	0.141	32.030	33.070	73.758%	74.348%
X		64.940%	0.279	0.082	0.133	31.460	32.070	73.208%	73.762%
σ		0.590%	0.028	0.019	0.010	0.970	1.159	0.599%	0.538%
%RSD		0.909	9.870	22.850	7.150	3.083	3.615	0.818	0.729
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:24:44	0.072	0.061	0.151	0.144	0.148	74.282%		
2	17:25:10	0.067	0.063	0.191	0.137	0.156	73.111%		
3	17:25:36	0.081	0.071	0.183	0.173	0.167	72.148%		
X		0.074	0.065	0.175	0.151	0.157	73.180%		
σ		0.007	0.005	0.021	0.019	0.010	1.069%		
%RSD		9.651	8.125	12.040	12.630	6.175	1.460		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:28:56	72.867%	0.090	13.710	13.270	0.000	9775.000	7741.000	7820.000
2	17:29:23	74.976%	0.250	13.640	14.040	0.000	9978.000	8023.000	8100.000
3	17:29:49	76.711%	0.267	13.340	12.150	0.000	10020.000	8122.000	8142.000
X		74.852%	0.202	13.560	13.150	0.000	9925.000	7962.000	8021.000
σ		1.925%	0.098	0.194	0.950	0.000	131.400	197.800	175.100
%RSD		2.572	48.340	1.432	7.226	0.000	1.324	2.484	2.183
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:28:56	1012.000	3474.000	0.000	2072.000	21320.000	19670.000	62.742%	30.850
2	17:29:23	997.500	3585.000	0.000	2128.000	22410.000	20990.000	63.258%	32.780
3	17:29:49	1001.000	3548.000	0.000	2082.000	22340.000	20860.000	63.823%	31.940
X		1004.000	3536.000	0.000	2094.000	22020.000	20510.000	63.275%	31.860
σ		7.841	56.320	0.000	30.230	608.400	727.100	0.541%	0.967
%RSD		0.781	1.593	0.000	1.444	2.762	3.546	0.855	3.035
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:28:56	8.206	6.139	1160.000	2787.000	2540.000	3.295	6.157	7.785
2	17:29:23	8.389	5.796	1231.000	2950.000	2685.000	3.469	5.991	7.933
3	17:29:49	7.864	6.086	1252.000	2994.000	2701.000	3.545	5.876	8.349
X		8.153	6.007	1214.000	2910.000	2642.000	3.437	6.008	8.023
σ		0.267	0.185	48.190	109.300	88.650	0.128	0.141	0.292
%RSD		3.270	3.076	3.969	3.756	3.356	3.726	2.348	3.643
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:28:56	7.500	23.700	23.810	2.294	0.303	-4.458	0.000	77.150
2	17:29:23	8.095	24.960	26.160	1.810	-2.587	-6.309	0.000	81.520
3	17:29:49	8.032	24.510	26.060	0.761	-2.027	1.788	0.000	81.680
X		7.876	24.390	25.340	1.622	-1.437	-2.993	0.000	80.120
σ		0.327	0.640	1.329	0.784	1.533	4.243	0.000	2.573
%RSD		4.152	2.623	5.246	48.340	106.700	141.800	0.000	3.211
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:28:56	66.569%	1.129	1.089	64.911%	0.013	0.011	0.061	-2.096
2	17:29:23	68.034%	1.059	1.061	65.713%	0.020	0.028	0.093	-2.225
3	17:29:49	68.307%	1.170	0.980	66.660%	0.016	0.021	0.155	-2.201
X		67.637%	1.119	1.043	65.761%	0.016	0.020	0.103	-2.174
σ		0.934%	0.056	0.057	0.876%	0.004	0.009	0.048	0.068
%RSD		1.381	4.988	5.452	1.332	21.810	44.600	46.530	3.147
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:28:56	62.500%	0.405	0.488	0.579	42.750	41.710	71.689%	71.651%
2	17:29:23	64.394%	0.419	0.537	0.532	42.530	43.420	73.934%	73.913%
3	17:29:49	66.395%	0.403	0.448	0.590	41.310	42.800	75.621%	75.646%
X		64.429%	0.409	0.491	0.567	42.190	42.640	73.748%	73.737%
σ		1.948%	0.009	0.045	0.031	0.778	0.862	1.973%	2.004%
%RSD		3.023	2.104	9.173	5.458	1.843	2.022	2.675	2.717
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:28:56	0.022	0.017	4.032	3.727	3.764	69.084%		
2	17:29:23	0.010	0.015	3.941	3.663	3.790	73.459%		
3	17:29:49	0.013	0.011	4.155	3.711	3.850	74.176%		
X		0.015	0.015	4.043	3.700	3.801	72.240%		
σ		0.006	0.003	0.107	0.033	0.044	2.756%		
%RSD		42.210	20.610	2.647	0.903	1.170	3.815		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:11	74.103%	0.111	2.479	2.988	0.000	1949.000	1550.000	1541.000
2	17:33:37	75.256%	0.155	2.875	2.935	0.000	1974.000	1553.000	1572.000
3	17:34:04	76.382%	0.040	3.703	3.176	0.000	1945.000	1603.000	1578.000
X		75.247%	0.102	3.019	3.033	0.000	1956.000	1569.000	1564.000
σ		1.140%	0.058	0.625	0.126	0.000	15.500	29.890	19.930
%RSD		1.515	57.130	20.690	4.162	0.000	0.792	1.905	1.275
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:11	190.000	662.100	0.000	337.100	4196.000	3879.000	66.795%	8.035
2	17:33:37	195.700	662.200	0.000	332.600	4259.000	3915.000	67.883%	7.797
3	17:34:04	191.400	663.500	0.000	338.200	4255.000	4082.000	67.763%	8.594
X		192.300	662.600	0.000	336.000	4237.000	3959.000	67.481%	8.142
σ		2.973	0.764	0.000	2.975	35.630	108.000	0.597%	0.409
%RSD		1.546	0.115	0.000	0.886	0.841	2.727	0.884	5.029
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:11	1.314	1.285	216.900	545.300	521.700	0.717	1.735	1.894
2	17:33:37	1.362	1.200	225.500	566.600	520.300	0.696	1.688	2.004
3	17:34:04	1.104	1.145	226.900	567.000	520.300	0.713	2.133	1.866
X		1.260	1.210	223.100	559.700	520.800	0.708	1.852	1.922
σ		0.137	0.070	5.432	12.400	0.815	0.011	0.245	0.073
%RSD		10.880	5.824	2.435	2.216	0.156	1.554	13.200	3.788
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:11	1.705	5.308	4.735	0.678	-1.439	-1.477	0.000	16.180
2	17:33:37	1.757	5.121	5.161	-0.258	-1.134	0.395	0.000	16.390
3	17:34:04	1.451	5.260	5.577	1.083	0.314	-0.482	0.000	16.290
X		1.637	5.230	5.158	0.501	-0.753	-0.521	0.000	16.290
σ		0.164	0.097	0.421	0.688	0.937	0.937	0.000	0.106
%RSD		9.988	1.852	8.163	137.300	124.400	179.700	0.000	0.651
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:11	68.461%	-0.343	-0.356	71.279%	0.001	-0.014	0.023	-2.253
2	17:33:37	70.924%	-0.178	-0.283	73.583%	-0.006	0.006	0.015	-2.282
3	17:34:04	71.123%	-0.243	-0.347	73.391%	-0.023	0.010	0.030	-2.267
X		70.169%	-0.255	-0.329	72.751%	-0.009	0.001	0.023	-2.267
σ		1.483%	0.083	0.040	1.278%	0.012	0.013	0.008	0.015
%RSD		2.113	32.540	12.210	1.757	126.800	2346.000	33.050	0.648
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:33:11	70.635%	0.047	0.107	0.108	8.155	8.176	75.665%	76.679%
2	17:33:37	71.051%	0.025	0.108	0.097	8.246	8.411	77.518%	79.187%
3	17:34:04	70.616%	-0.012	0.111	0.095	8.530	8.952	79.624%	79.505%
X		70.768%	0.020	0.109	0.100	8.310	8.513	77.602%	78.457%
σ		0.246%	0.030	0.002	0.007	0.196	0.398	1.981%	1.548%
%RSD		0.347	149.200	1.934	7.167	2.353	4.672	2.553	1.973
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:33:11	0.001	0.000	0.748	0.626	0.671	79.090%		
2	17:33:37	0.003	0.001	0.773	0.706	0.738	78.349%		
3	17:34:04	0.004	0.001	0.810	0.706	0.767	77.816%		
X		0.003	0.001	0.777	0.680	0.725	78.418%		
σ		0.002	0.001	0.031	0.046	0.049	0.639%		
%RSD		59.950	93.450	3.991	6.794	6.747	0.815		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	70.855%	47.780	948.300	980.200	0.000	54680.000	51440.000	51670.000
2	17:37:53	70.159%	49.620	980.200	1015.000	0.000	56310.000	53230.000	53760.000
3	17:38:19	70.623%	50.430	994.700	1002.000	0.000	55970.000	53320.000	53890.000
X		70.545%	49.280	974.400	999.100	0.000	55650.000	52660.000	53100.000
σ		0.354%	1.358	23.720	17.540	0.000	856.000	1062.000	1248.000
%RSD		0.502	2.757	2.434	1.755	0.000	1.538	2.016	2.350
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	6933.000	17650.000	0.000	50990.000	68670.000	68510.000	60.258%	1005.000
2	17:37:53	7195.000	18110.000	0.000	52880.000	72380.000	72370.000	60.003%	1059.000
3	17:38:19	7269.000	18140.000	0.000	53560.000	74290.000	73400.000	59.665%	1062.000
X		7132.000	17960.000	0.000	52480.000	71780.000	71420.000	59.975%	1042.000
σ		176.200	272.700	0.000	1331.000	2857.000	2580.000	0.298%	32.000
%RSD		2.470	1.518	0.000	2.537	3.980	3.612	0.496	3.070
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	482.300	193.900	1644.000	4168.000	4029.000	481.800	477.700	249.200
2	17:37:53	503.600	204.300	1604.000	4361.000	4194.000	501.200	498.400	256.600
3	17:38:19	503.600	203.500	1627.000	4437.000	4218.000	507.700	503.300	259.100
X		496.500	200.500	1625.000	4322.000	4147.000	496.900	493.100	255.000
σ		12.270	5.778	20.470	138.900	103.000	13.470	13.640	5.164
%RSD		2.472	2.881	1.260	3.213	2.485	2.711	2.766	2.026
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	242.500	484.700	475.000	39.580	7.718	7.438	0.000	1063.000
2	17:37:53	256.600	513.900	494.900	39.370	7.888	7.107	0.000	1088.000
3	17:38:19	253.100	514.900	511.400	41.980	11.590	6.322	0.000	1091.000
X		250.700	504.500	493.800	40.310	9.065	6.956	0.000	1081.000
σ		7.313	17.170	18.240	1.451	2.187	0.574	0.000	15.350
%RSD		2.917	3.403	3.694	3.599	24.130	8.245	0.000	1.420
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	62.690%	1001.000	1024.000	60.091%	50.970	50.840	50.810	37.310
2	17:37:53	63.915%	1033.000	1058.000	60.721%	53.270	53.460	55.200	40.810
3	17:38:19	63.272%	1061.000	1063.000	60.774%	53.030	52.830	53.700	39.360
X		63.292%	1032.000	1049.000	60.529%	52.420	52.380	53.240	39.160
σ		0.613%	30.140	21.270	0.380%	1.265	1.366	2.231	1.759
%RSD		0.968	2.921	2.028	0.628	2.414	2.608	4.192	4.492
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:37:26	59.446%	2078.000	514.500	506.300	1984.000	2048.000	70.005%	70.607%
2	17:37:53	59.079%	2203.000	538.600	535.600	2061.000	2168.000	70.519%	70.858%
3	17:38:19	59.759%	2208.000	527.500	533.300	2045.000	2147.000	71.705%	71.101%
X		59.428%	2163.000	526.800	525.100	2030.000	2121.000	70.743%	70.856%
σ		0.340%	73.540	12.050	16.300	40.300	63.710	0.872%	0.247%
%RSD		0.573	3.400	2.286	3.105	1.985	3.004	1.232	0.348
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:37:26	49.620	47.560	25.270	24.950	24.880	68.098%		
2	17:37:53	52.600	50.440	26.150	25.690	26.240	67.920%		
3	17:38:19	53.470	50.660	26.970	26.210	26.500	68.097%		
X		51.900	49.550	26.130	25.620	25.870	68.038%		
σ		2.017	1.727	0.852	0.632	0.872	0.102%		
%RSD		3.887	3.485	3.259	2.467	3.372	0.150		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:41	67.761%	50.730	985.300	1023.000	0.000	56740.000	53050.000	53160.000
2	17:42:07	68.304%	52.240	1028.000	1045.000	0.000	58160.000	54910.000	55110.000
3	17:42:34	68.243%	53.050	1024.000	1067.000	0.000	58510.000	55970.000	56070.000
X		68.103%	52.010	1012.000	1045.000	0.000	57800.000	54640.000	54780.000
σ		0.297%	1.175	23.600	21.940	0.000	937.200	1479.000	1482.000
%RSD		0.437	2.259	2.331	2.100	0.000	1.621	2.707	2.705
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:41	6976.000	18040.000	0.000	52710.000	70440.000	71210.000	57.631%	1057.000
2	17:42:07	7209.000	18360.000	0.000	54730.000	74490.000	73570.000	58.099%	1095.000
3	17:42:34	7341.000	18630.000	0.000	55980.000	76740.000	74830.000	58.427%	1107.000
X		7175.000	18350.000	0.000	54480.000	73890.000	73200.000	58.052%	1086.000
σ		184.900	297.300	0.000	1649.000	3191.000	1840.000	0.400%	26.050
%RSD		2.576	1.620	0.000	3.028	4.319	2.514	0.689	2.398
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:41	501.800	201.600	1695.000	4217.000	4057.000	496.200	497.700	255.500
2	17:42:07	520.300	210.400	1661.000	4400.000	4189.000	517.800	515.700	266.400
3	17:42:34	523.000	211.000	1658.000	4446.000	4197.000	522.000	515.600	266.100
X		515.000	207.700	1671.000	4354.000	4148.000	512.000	509.700	262.700
σ		11.510	5.288	20.280	120.800	78.580	13.830	10.360	6.191
%RSD		2.234	2.546	1.213	2.774	1.894	2.701	2.033	2.357
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:41	251.100	508.000	498.200	38.780	9.199	9.874	0.000	1086.000
2	17:42:07	262.200	537.400	532.400	44.360	7.288	10.410	0.000	1142.000
3	17:42:34	262.200	537.300	522.400	42.420	7.895	7.358	0.000	1119.000
X		258.500	527.600	517.600	41.850	8.127	9.213	0.000	1116.000
σ		6.438	16.970	17.580	2.835	0.976	1.628	0.000	28.050
%RSD		2.491	3.216	3.396	6.774	12.010	17.670	0.000	2.514
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:41	61.875%	1036.000	1063.000	58.294%	53.540	53.480	54.430	38.710
2	17:42:07	62.152%	1072.000	1086.000	60.064%	54.270	52.800	53.600	36.830
3	17:42:34	63.938%	1100.000	1101.000	61.103%	54.760	53.790	55.170	41.380
X		62.655%	1069.000	1083.000	59.820%	54.190	53.360	54.400	38.970
σ		1.120%	31.680	19.230	1.420%	0.614	0.504	0.787	2.284
%RSD		1.787	2.963	1.775	2.375	1.133	0.945	1.446	5.861
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:41:41	58.345%	2157.000	530.500	522.500	2017.000	2090.000	69.858%	69.540%
2	17:42:07	59.244%	2290.000	542.400	550.600	2151.000	2256.000	68.573%	70.999%
3	17:42:34	58.521%	2347.000	554.000	561.300	2155.000	2272.000	71.023%	71.275%
X		58.703%	2265.000	542.300	544.800	2108.000	2206.000	69.818%	70.604%
σ		0.477%	97.110	11.730	20.080	78.500	101.100	1.225%	0.932%
%RSD		0.812	4.288	2.163	3.686	3.725	4.581	1.755	1.321
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:41:41	51.130	49.160	26.420	25.580	25.950	66.995%		
2	17:42:07	54.230	51.650	27.320	26.450	26.790	67.525%		
3	17:42:34	55.350	52.690	27.620	26.870	27.000	67.630%		
X		53.570	51.160	27.120	26.300	26.580	67.383%		
σ		2.183	1.812	0.625	0.661	0.554	0.340%		
%RSD		4.075	3.542	2.303	2.512	2.086	0.505		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	17:45:55	66.966%	46.480	900.900	957.900	0.000	54930.000	51120.000	51580.000	
2	17:46:21	70.097%	47.050	927.500	956.900	0.000	54920.000	52110.000	52230.000	
3	17:46:48	70.738%	48.950	938.900	961.300	0.000	55530.000	52660.000	52900.000	
X		69.267%	47.490	922.400	958.700	0.000	55120.000	51960.000	52240.000	
		σ	2.018%	1.290	19.510	2.293	0.000	348.600	777.000	659.600
		%RSD	2.914	2.717	2.115	0.239	0.000	0.632	1.495	1.263
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	17:45:55	2724.000	12730.000	0.000	51480.000	67930.000	67220.000	57.569%	1023.000	
2	17:46:21	2757.000	12810.000	0.000	51260.000	71850.000	71680.000	58.318%	1064.000	
3	17:46:48	2847.000	12900.000	0.000	51520.000	71720.000	71160.000	58.460%	1063.000	
X		2776.000	12820.000	0.000	51420.000	70500.000	70020.000	58.116%	1050.000	
		σ	63.560	87.620	0.000	140.600	2224.000	2440.000	0.478%	23.130
		%RSD	2.290	0.684	0.000	0.273	3.154	3.485	0.823	2.203
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	17:45:55	473.700	187.200	1601.000	3638.000	3513.000	474.700	472.300	243.000	
2	17:46:21	482.400	194.000	1659.000	3726.000	3616.000	481.500	481.300	248.400	
3	17:46:48	485.200	194.800	1680.000	3800.000	3679.000	491.400	494.100	251.300	
X		480.400	192.000	1647.000	3721.000	3603.000	482.500	482.600	247.600	
		σ	5.986	4.168	41.060	81.010	83.490	8.369	10.930	4.193
		%RSD	1.246	2.171	2.493	2.177	2.317	1.735	2.266	1.694
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	17:45:55	240.900	478.500	478.300	38.210	8.444	6.526	0.000	1031.000	
2	17:46:21	242.900	495.500	487.200	37.820	9.935	6.955	0.000	1050.000	
3	17:46:48	243.600	502.700	487.400	38.620	6.702	5.063	0.000	1057.000	
X		242.500	492.200	484.300	38.220	8.361	6.182	0.000	1046.000	
		σ	1.377	12.450	5.182	0.401	1.618	0.992	0.000	13.420
		%RSD	0.568	2.530	1.070	1.048	19.350	16.050	0.000	1.283
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	17:45:55	60.426%	1040.000	1043.000	58.851%	47.380	47.230	51.730	34.760	
2	17:46:21	63.305%	1050.000	1086.000	59.497%	48.500	47.740	51.710	36.330	
3	17:46:48	63.416%	1079.000	1093.000	59.708%	48.080	48.440	51.900	35.630	
X		62.383%	1056.000	1074.000	59.352%	47.980	47.800	51.780	35.570	
		σ	1.695%	20.170	26.960	0.446%	0.567	0.607	0.109	0.786
		%RSD	2.717	1.909	2.511	0.752	1.181	1.271	0.210	2.208
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	17:45:55	57.111%	2188.000	526.700	533.100	1936.000	2026.000	66.748%	68.994%	
2	17:46:21	58.984%	2201.000	536.600	529.600	1958.000	2018.000	70.201%	70.483%	
3	17:46:48	60.212%	2217.000	534.500	533.200	1981.000	2042.000	70.838%	71.574%	
X		58.769%	2202.000	532.600	531.900	1958.000	2029.000	69.262%	70.350%	
		σ	1.561%	14.790	5.199	2.040	22.500	12.130	2.200%	1.295%
		%RSD	2.657	0.672	0.976	0.384	1.149	0.598	3.177	1.841
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	17:45:55	50.060	47.840	23.750	23.400	23.570	65.164%			
2	17:46:21	50.140	48.300	24.160	23.710	23.890	67.654%			
3	17:46:48	48.910	48.240	23.870	23.360	23.490	69.163%			
X		49.700	48.130	23.930	23.490	23.650	67.327%			
		σ	0.690	0.252	0.211	0.193	0.212	2.020%		
		%RSD	1.387	0.523	0.881	0.823	0.895	3.000		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:11	68.642%	0.198	55.100	55.710	0.000	41850.000	27890.000	28400.000
2	17:50:37	70.082%	0.218	52.390	56.720	0.000	42520.000	28860.000	29230.000
3	17:51:04	69.035%	0.272	52.630	56.300	0.000	43290.000	29620.000	30070.000
X		69.253%	0.229	53.370	56.240	0.000	42550.000	28790.000	29230.000
σ		0.744%	0.038	1.504	0.509	0.000	719.800	867.400	833.100
%RSD		1.075	16.740	2.818	0.904	0.000	1.692	3.013	2.850
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:11	2322.000	12480.000	0.000	9258.000	51870.000	49830.000	56.788%	82.650
2	17:50:37	2359.000	12570.000	0.000	9148.000	52600.000	51460.000	57.776%	86.050
3	17:51:04	2445.000	12830.000	0.000	9592.000	55020.000	53060.000	57.560%	86.200
X		2375.000	12620.000	0.000	9332.000	53160.000	51450.000	57.375%	84.970
σ		63.190	181.000	0.000	231.200	1647.000	1615.000	0.519%	2.008
%RSD		2.661	1.434	0.000	2.477	3.098	3.138	0.905	2.363
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:11	5.555	7.955	4405.000	4189.000	3875.000	3.552	8.297	7.051
2	17:50:37	5.493	7.883	4543.000	4267.000	4002.000	3.616	8.636	6.930
3	17:51:04	4.768	7.797	4537.000	4338.000	4018.000	3.786	8.762	7.479
X		5.272	7.878	4495.000	4265.000	3965.000	3.652	8.565	7.154
σ		0.438	0.079	77.930	74.980	78.050	0.121	0.241	0.288
%RSD		8.306	1.001	1.734	1.758	1.968	3.309	2.808	4.031
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:11	6.768	34.320	32.670	8.127	-1.608	-2.087	0.000	312.500
2	17:50:37	6.789	35.950	34.010	6.896	-1.289	-2.140	0.000	323.100
3	17:51:04	7.254	35.330	34.300	7.679	-1.689	-0.200	0.000	317.200
X		6.937	35.200	33.660	7.567	-1.529	-1.476	0.000	317.600
σ		0.275	0.826	0.870	0.623	0.211	1.105	0.000	5.320
%RSD		3.958	2.348	2.583	8.235	13.810	74.870	0.000	1.675
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:11	59.232%	12.110	12.190	58.354%	0.049	0.063	0.095	-2.186
2	17:50:37	60.457%	11.620	11.050	59.375%	0.049	0.060	0.110	-2.219
3	17:51:04	62.546%	9.826	10.360	60.146%	0.058	0.054	0.194	-2.074
X		60.745%	11.190	11.200	59.292%	0.052	0.059	0.133	-2.159
σ		1.675%	1.203	0.925	0.899%	0.005	0.005	0.053	0.076
%RSD		2.758	10.750	8.262	1.517	9.965	7.904	40.060	3.518
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:50:11	57.814%	6.202	1.920	1.886	102.100	102.300	68.513%	67.933%
2	17:50:37	60.260%	4.274	1.412	1.364	103.500	103.500	68.336%	70.284%
3	17:51:04	58.529%	3.739	1.204	1.329	103.900	106.800	70.420%	70.872%
X		58.867%	4.738	1.512	1.527	103.200	104.200	69.090%	69.696%
σ		1.258%	1.296	0.368	0.312	0.953	2.353	1.155%	1.555%
%RSD		2.137	27.350	24.340	20.440	0.924	2.258	1.672	2.231
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:50:11	0.105	0.098	5.763	5.293	5.498	64.959%		
2	17:50:37	0.065	0.080	5.476	5.073	5.232	70.212%		
3	17:51:04	0.080	0.070	5.786	5.326	5.485	68.692%		
X		0.084	0.082	5.675	5.230	5.405	67.954%		
σ		0.020	0.014	0.173	0.138	0.150	2.703%		
%RSD		24.140	17.480	3.046	2.628	2.772	3.977		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	68.527%	0.071	55.840	53.450	0.000	43570.000	28490.000	28920.000
2	17:54:55	70.061%	0.168	53.400	55.210	0.000	43950.000	29510.000	29910.000
3	17:55:21	71.477%	0.068	57.790	53.790	0.000	43740.000	29530.000	30230.000
X		70.022%	0.102	55.680	54.150	0.000	43760.000	29180.000	29690.000
σ		1.476%	0.057	2.204	0.936	0.000	191.100	592.800	680.200
%RSD		2.107	56.120	3.959	1.728	0.000	0.437	2.032	2.291
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	50.550	7149.000	0.000	8922.000	52280.000	51200.000	58.186%	3.268
2	17:54:55	51.480	7195.000	0.000	9028.000	53870.000	52990.000	58.884%	3.851
3	17:55:21	55.220	7273.000	0.000	9368.000	56910.000	55340.000	58.795%	4.590
X		52.420	7206.000	0.000	9106.000	54350.000	53170.000	58.622%	3.903
σ		2.469	62.920	0.000	233.100	2355.000	2075.000	0.380%	0.662
%RSD		4.711	0.873	0.000	2.560	4.332	3.902	0.648	16.970
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	3.408	2.209	4256.000	97.570	312.100	2.150	5.547	3.414
2	17:54:55	1.050	2.033	4390.000	97.980	313.500	2.200	6.155	3.619
3	17:55:21	2.169	2.228	4473.000	100.300	317.900	2.055	6.280	3.399
X		2.209	2.157	4373.000	98.620	314.500	2.135	5.994	3.477
σ		1.179	0.107	109.400	1.471	3.003	0.073	0.392	0.123
%RSD		53.390	4.974	2.501	1.491	0.955	3.427	6.537	3.539
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	3.160	10.020	9.591	0.476	-0.444	-0.558	0.000	317.700
2	17:54:55	3.182	10.600	10.810	1.978	-1.980	-0.386	0.000	329.200
3	17:55:21	3.258	11.500	11.060	3.754	-0.491	0.990	0.000	324.300
X		3.200	10.710	10.490	2.070	-0.972	0.015	0.000	323.700
σ		0.051	0.748	0.787	1.641	0.874	0.848	0.000	5.804
%RSD		1.605	6.988	7.506	79.280	89.950	5517.000	0.000	1.793
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	59.930%	7.039	7.451	59.856%	-0.014	-0.004	0.064	-2.244
2	17:54:55	61.370%	7.677	7.456	60.736%	-0.015	0.015	0.116	-2.287
3	17:55:21	62.593%	8.383	7.835	61.313%	-0.013	0.006	0.046	-2.216
X		61.298%	7.700	7.581	60.635%	-0.014	0.006	0.075	-2.249
σ		1.333%	0.672	0.220	0.734%	0.001	0.010	0.037	0.036
%RSD		2.175	8.729	2.907	1.210	7.823	172.300	48.640	1.607
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	61.284%	0.942	0.840	0.943	77.740	79.330	68.078%	69.353%
2	17:54:55	61.327%	0.970	0.997	0.908	80.440	80.090	69.741%	70.895%
3	17:55:21	60.809%	1.047	0.984	1.013	78.180	80.860	72.552%	71.800%
X		61.140%	0.986	0.940	0.955	78.790	80.090	70.123%	70.683%
σ		0.287%	0.054	0.087	0.054	1.446	0.761	2.261%	1.237%
%RSD		0.470	5.500	9.263	5.605	1.835	0.950	3.225	1.751
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:54:28	0.040	0.020	0.358	0.284	0.321	68.637%		
2	17:54:55	0.014	0.025	0.378	0.331	0.349	70.494%		
3	17:55:21	0.030	0.023	0.390	0.300	0.328	69.995%		
X		0.028	0.023	0.375	0.305	0.332	69.709%		
σ		0.013	0.003	0.016	0.024	0.014	0.961%		
%RSD		47.000	12.840	4.231	7.877	4.359	1.378		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:43	70.998%	102.300	92.760	97.350	0.000	47290.000	45720.000	46030.000
2	17:59:09	72.260%	100.100	94.940	101.400	0.000	48220.000	47050.000	47210.000
3	17:59:36	73.205%	101.400	107.000	99.950	0.000	47920.000	47080.000	47040.000
X		72.154%	101.253%	98.240%	99.553%	0.000	95.621%	93.232%	93.512%
σ		1.107%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.534	1.091	7.823	2.038	0.000	0.989	1.659	1.361
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:43	444.700	5029.000	0.000	48770.000	47800.000	46560.000	67.576%	99.430
2	17:59:09	457.300	5134.000	0.000	50130.000	49740.000	48750.000	67.755%	97.410
3	17:59:36	459.800	5135.000	0.000	50130.000	49460.000	48700.000	69.262%	102.000
X		90.785%	101.985%	0.000	99.360%	98.000%	96.010%	68.198%	99.605%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.926%	n/a
%RSD		1.785	1.196	0.000	1.584	2.149	2.604	1.358	2.297
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:43	93.040	91.930	443.400	23970.000	22170.000	93.160	94.860	96.050
2	17:59:09	94.390	96.530	463.500	24980.000	23200.000	96.260	98.160	98.660
3	17:59:36	95.130	95.650	459.800	25090.000	23220.000	98.000	98.940	98.280
X		94.187%	94.702%	91.111%	98.712%	91.443%	95.805%	97.320%	97.666%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.125	2.579	2.346	2.497	2.622	2.562	2.227	1.442
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:43	93.690	97.590	96.160	94.050	95.940	93.000	0.000	93.480
2	17:59:09	96.860	100.200	100.100	98.640	98.870	97.820	0.000	94.250
3	17:59:36	97.000	100.400	100.200	97.620	102.700	96.850	0.000	95.370
X		95.850%	99.393%	98.819%	96.770%	99.153%	95.891%	0.000	94.367%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.949	1.577	2.333	2.490	3.396	2.658	0.000	1.003
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:43	68.178%	89.600	90.240	69.044%	98.020	96.970	94.850	93.850
2	17:59:09	70.783%	95.190	92.920	71.210%	99.930	99.400	99.970	96.780
3	17:59:36	70.247%	97.890	96.660	71.056%	101.200	99.800	100.900	98.020
X		69.736%	94.227%	93.274%	70.437%	99.727%	98.721%	98.577%	96.217%
σ		1.376%	n/a	n/a	1.209%	n/a	n/a	n/a	n/a
%RSD		1.973	4.484	3.460	1.716	1.618	1.552	3.311	2.226
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:58:43	69.257%	95.350	95.210	96.880	93.510	94.400	75.907%	76.215%
2	17:59:09	70.582%	97.220	97.580	98.640	95.320	97.800	77.355%	77.976%
3	17:59:36	69.683%	99.730	98.830	100.800	96.600	98.450	77.659%	78.116%
X		69.840%	97.435%	97.204%	98.773%	95.142%	96.886%	76.974%	77.436%
σ		0.676%	n/a	n/a	n/a	n/a	n/a	0.937%	1.059%
%RSD		0.969	2.257	1.892	1.990	1.629	2.248	1.217	1.368
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	17:58:43	103.100	100.500	101.200	102.900	102.800	72.206%		
2	17:59:09	107.000	104.300	108.700	106.800	107.800	73.019%		
3	17:59:36	106.300	104.700	108.300	108.600	108.400	72.643%		
X		105.481%	103.199%	106.095%	106.085%	106.333%	72.623%		
σ		n/a	n/a	n/a	n/a	n/a	0.407%		
%RSD		1.961	2.231	4.002	2.753	2.897	0.560		

CCB3 1/29/2015 6:05:40 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:06	73.600%	0.088	2.791	2.054	0.000	-88.910	-2.239	-0.799
2	18:06:32	75.600%	0.063	2.999	2.168	0.000	-89.240	-1.705	-1.504
3	18:06:59	78.366%	0.171	1.754	2.191	0.000	-88.520	-0.969	-1.123
X		75.855%	0.108	2.515	2.138	0.000	-88.890	-1.638	-1.142
σ		2.393%	0.057	0.667	0.073	0.000	0.358	0.638	0.353
%RSD		3.155	52.710	26.520	3.419	0.000	0.403	38.960	30.880
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:06	2.032	-3.128	0.000	-38.780	15.040	23.730	68.056%	0.579
2	18:06:32	0.271	-6.385	0.000	-49.870	47.010	25.290	69.492%	0.690
3	18:06:59	0.288	-6.920	0.000	-53.270	54.770	25.380	69.784%	0.427
X		0.864	-5.478	0.000	-47.310	38.940	24.800	69.111%	0.565
σ		1.012	2.053	0.000	7.581	21.060	0.925	0.925%	0.132
%RSD		117.100	37.470	0.000	16.020	54.080	3.729	1.338	23.330
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:06	-0.042	-0.041	0.179	-4.898	2.594	0.027	0.263	0.121
2	18:06:32	0.010	-0.059	0.168	-5.834	-1.028	0.024	0.485	0.150
3	18:06:59	-0.039	-0.018	0.214	-5.782	0.723	-0.008	0.334	0.103
X		-0.024	-0.039	0.187	-5.505	0.763	0.014	0.361	0.125
σ		0.029	0.020	0.024	0.526	1.811	0.020	0.113	0.023
%RSD		122.300	52.080	12.870	9.559	237.300	139.000	31.420	18.790
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:06	0.122	0.297	0.346	-0.614	-2.053	-2.516	0.000	0.027
2	18:06:32	0.058	0.237	0.425	-0.125	-0.121	-1.804	0.000	0.018
3	18:06:59	0.070	0.310	0.329	-0.376	-0.015	-2.505	0.000	0.036
X		0.083	0.281	0.366	-0.372	-0.730	-2.275	0.000	0.027
σ		0.034	0.039	0.052	0.244	1.147	0.408	0.000	0.009
%RSD		41.260	13.750	14.060	65.700	157.200	17.940	0.000	33.420
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:06	68.253%	-0.283	-0.384	71.981%	-0.018	-0.012	0.008	-2.324
2	18:06:32	69.717%	-0.273	-0.318	73.200%	-0.019	-0.011	-0.007	-2.276
3	18:06:59	71.963%	-0.231	-0.330	74.298%	-0.007	0.001	0.007	-2.305
X		69.978%	-0.263	-0.344	73.160%	-0.015	-0.007	0.003	-2.302
σ		1.869%	0.028	0.035	1.159%	0.007	0.007	0.009	0.025
%RSD		2.670	10.530	10.190	1.584	46.070	101.400	308.000	1.067
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:06	68.441%	0.145	0.123	0.184	-0.020	-0.009	74.236%	75.249%
2	18:06:32	72.314%	0.147	0.166	0.153	-0.029	-0.005	75.812%	77.365%
3	18:06:59	73.201%	0.151	0.131	0.178	-0.029	0.029	78.830%	79.237%
X		71.319%	0.148	0.140	0.171	-0.026	0.005	76.293%	77.284%
σ		2.531%	0.003	0.023	0.016	0.005	0.021	2.335%	1.995%
%RSD		3.549	2.035	16.370	9.370	20.020	445.500	3.060	2.581
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:06:06	0.011	0.010	0.020	0.021	0.017	76.845%		
2	18:06:32	0.020	0.012	0.011	0.012	0.008	80.159%		
3	18:06:59	0.009	0.010	0.024	0.006	0.018	80.453%		
X		0.013	0.011	0.018	0.013	0.014	79.152%		
σ		0.006	0.001	0.007	0.008	0.006	2.003%		
%RSD		43.540	10.390	37.530	58.740	38.190	2.531		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:24	72.382%	0.067	14.060	14.940	0.000	9994.000	7681.000	7724.000
2	18:10:50	71.063%	0.141	14.430	14.400	0.000	10400.000	8052.000	8082.000
3	18:11:17	73.558%	0.113	15.650	15.550	0.000	10230.000	7996.000	8010.000
X		72.334%	0.107	14.710	14.960	0.000	10210.000	7910.000	7938.000
σ		1.248%	0.038	0.834	0.575	0.000	204.400	200.200	189.100
%RSD		1.725	35.200	5.666	3.845	0.000	2.003	2.531	2.382
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:24	4.303	2056.000	0.000	1890.000	21200.000	20380.000	58.873%	1.080
2	18:10:50	4.373	2119.000	0.000	1982.000	22450.000	20940.000	59.499%	1.487
3	18:11:17	4.190	2088.000	0.000	1957.000	23390.000	21300.000	59.912%	1.798
X		4.289	2088.000	0.000	1943.000	22350.000	20870.000	59.428%	1.455
σ		0.092	31.610	0.000	47.700	1098.000	462.500	0.523%	0.360
%RSD		2.153	1.514	0.000	2.455	4.912	2.215	0.880	24.730
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:24	2.525	2.146	1135.000	1.825	105.200	2.259	3.761	3.980
2	18:10:50	2.278	2.155	1173.000	0.055	103.300	2.126	4.014	3.891
3	18:11:17	0.966	1.980	1189.000	-2.013	95.990	2.161	3.450	3.973
X		1.923	2.094	1165.000	-0.044	101.500	2.182	3.741	3.948
σ		0.838	0.098	27.520	1.921	4.875	0.069	0.283	0.049
%RSD		43.560	4.690	2.362	4321.000	4.803	3.161	7.550	1.252
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:24	3.985	10.920	11.120	0.049	-1.939	-1.888	0.000	80.610
2	18:10:50	3.680	11.060	11.800	1.462	-1.423	-1.124	0.000	84.130
3	18:11:17	3.749	11.900	11.740	0.227	-0.206	-0.127	0.000	83.200
X		3.805	11.290	11.550	0.579	-1.189	-1.046	0.000	82.650
σ		0.160	0.530	0.376	0.770	0.890	0.883	0.000	1.821
%RSD		4.205	4.694	3.250	133.000	74.800	84.390	0.000	2.204
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:24	59.818%	1.633	1.503	60.541%	0.029	0.011	0.028	-2.281
2	18:10:50	62.127%	1.443	1.374	63.462%	0.001	-0.001	0.036	-2.199
3	18:11:17	62.778%	1.220	1.266	63.110%	0.004	-0.003	0.028	-2.250
X		61.575%	1.432	1.381	62.371%	0.011	0.002	0.031	-2.243
σ		1.556%	0.206	0.119	1.594%	0.016	0.008	0.005	0.042
%RSD		2.526	14.420	8.607	2.556	136.800	345.900	15.580	1.852
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:10:24	61.035%	0.902	0.958	1.019	33.480	34.680	68.979%	68.644%
2	18:10:50	61.210%	0.804	0.964	1.094	34.140	34.730	70.343%	70.358%
3	18:11:17	60.838%	0.885	0.927	1.095	34.860	35.900	71.397%	71.658%
X		61.027%	0.864	0.950	1.069	34.160	35.100	70.240%	70.220%
σ		0.186%	0.053	0.019	0.044	0.688	0.690	1.213%	1.512%
%RSD		0.305	6.088	2.043	4.082	2.014	1.967	1.727	2.153
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:10:24	0.014	0.010	0.156	0.152	0.157	69.332%		
2	18:10:50	0.013	0.010	0.192	0.153	0.166	70.419%		
3	18:11:17	0.004	0.011	0.181	0.146	0.172	73.416%		
X		0.010	0.010	0.177	0.150	0.165	71.056%		
σ		0.006	0.000	0.019	0.004	0.007	2.115%		
%RSD		55.870	4.876	10.470	2.489	4.501	2.977		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:53	75.035%	1.075	4.636	5.953	0.000	-8.705	87.640	87.020
2	18:18:20	76.756%	0.804	5.392	5.648	0.000	-5.531	81.580	87.060
3	18:18:46	79.976%	1.056	5.595	5.569	0.000	-7.419	89.230	84.740
X		77.256%	97.831%	104.155%	114.463%	0.000	-9.023%	86.149%	86.273%
		2.508%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
		3.246	15.430	9.710	3.539	0.000	22.110	4.688	1.543
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:53	28.240	444.000	0.000	34.700	121.800	98.420	70.271%	5.144
2	18:18:20	28.560	449.400	0.000	37.710	128.500	104.300	70.884%	7.092
3	18:18:46	28.730	439.200	0.000	32.390	117.200	108.600	71.066%	6.902
X		95.031%	88.840%	0.000	34.933%	122.520%	103.782%	70.740%	127.590%
		n/a	n/a	0.000	n/a	n/a	n/a	0.417%	n/a
		0.865	1.143	0.000	7.635	4.628	4.929	0.589	16.840
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:53	0.810	1.883	4.589	38.660	45.480	0.450	1.415	2.439
2	18:18:20	0.957	1.884	4.606	39.450	43.270	0.458	1.284	2.463
3	18:18:46	0.889	1.979	4.659	39.400	41.860	0.417	1.198	2.251
X		88.547%	95.772%	92.360%	78.337%	87.072%	88.267%	129.908%	119.217%
		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		8.341	2.890	0.796	1.123	4.191	4.898	8.437	4.876
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:53	2.191	5.252	5.113	0.999	4.651	4.412	0.000	4.784
2	18:18:20	1.971	5.507	5.687	1.028	3.081	3.791	0.000	4.857
3	18:18:46	2.024	5.317	5.202	1.224	4.122	4.831	0.000	4.808
X		103.120%	107.172%	106.679%	108.343%	79.028%	86.893%	0.000	96.327%
		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
		5.570	2.476	5.791	11.300	20.230	12.050	0.000	0.774
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:53	67.379%	4.179	3.952	73.748%	0.990	0.994	1.076	-1.282
2	18:18:20	69.002%	4.185	4.335	74.744%	1.020	1.060	0.872	-1.285
3	18:18:46	69.704%	4.251	4.245	74.712%	0.975	0.974	0.998	-1.263
X		68.695%	84.100%	83.545%	74.401%	99.477%	100.932%	98.215%	-127.676%
		1.192%	n/a	n/a	0.566%	n/a	n/a	n/a	n/a
		1.736	0.957	4.796	0.761	2.271	4.483	10.460	0.910
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:17:53	71.397%	4.953	1.906	1.897	9.194	9.704	78.864%	78.042%
2	18:18:20	71.164%	5.834	1.924	2.020	9.759	9.467	79.377%	79.219%
3	18:18:46	73.612%	5.090	1.920	1.825	10.080	9.720	80.828%	79.369%
X		72.058%	105.848%	95.821%	95.699%	96.772%	96.304%	79.689%	78.877%
		1.351%	n/a	n/a	n/a	n/a	n/a	1.019%	0.727%
		1.875	8.964	0.491	5.155	4.628	1.469	1.278	0.922
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:17:53	0.932	0.931	1.032	0.938	0.981	80.474%		
2	18:18:20	0.983	0.952	1.184	0.985	1.085	77.837%		
3	18:18:46	0.994	0.960	1.135	1.000	1.055	80.062%		
X		96.982%	94.772%	111.695%	97.419%	104.050%	79.457%		
		n/a	n/a	n/a	n/a	n/a	1.419%		
		3.430	1.532	6.969	3.350	5.171	1.786		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:28	73.548%	0.065	1.891	1.000	0.000	-99.140	-6.232	-4.599
2	18:26:54	77.118%	0.084	0.063	0.906	0.000	-99.880	-7.173	-5.255
3	18:27:21	77.669%	0.106	0.344	1.620	0.000	-100.500	-5.790	-5.363
X		76.112%	0.085	0.766	1.175	0.000	-99.830	-6.398	-5.072
σ		2.237%	0.020	0.984	0.388	0.000	0.676	0.706	0.413
%RSD		2.939	24.120	128.600	33.010	0.000	0.677	11.040	8.145
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:28	-0.293	-3.132	0.000	-47.720	1.048	6.100	68.382%	3.943
2	18:26:54	-0.196	-7.985	0.000	-54.030	0.682	4.022	69.598%	2.668
3	18:27:21	-0.050	-8.258	0.000	-57.420	-7.615	3.431	70.587%	3.148
X		-0.180	-6.458	0.000	-53.060	-1.962	4.518	69.523%	3.253
σ		0.122	2.884	0.000	4.923	4.899	1.402	1.105%	0.644
%RSD		67.900	44.650	0.000	9.279	249.800	31.030	1.589	19.800
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:28	-0.056	0.004	0.097	-9.853	-0.410	-0.009	0.267	0.201
2	18:26:54	0.014	-0.066	0.053	-11.980	-2.234	-0.003	0.163	0.173
3	18:27:21	-0.047	-0.026	0.065	-12.850	-1.825	-0.003	0.228	0.254
X		-0.030	-0.030	0.072	-11.560	-1.490	-0.005	0.219	0.209
σ		0.038	0.035	0.023	1.542	0.957	0.004	0.052	0.041
%RSD		128.100	118.100	31.950	13.340	64.240	72.510	23.880	19.670
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:28	0.076	0.055	0.047	-0.370	-0.886	-2.224	0.000	0.009
2	18:26:54	0.050	0.079	0.082	-0.450	-0.725	-3.087	0.000	0.018
3	18:27:21	0.062	0.051	0.071	-0.247	-1.785	-1.201	0.000	0.010
X		0.062	0.062	0.067	-0.356	-1.132	-2.170	0.000	0.012
σ		0.013	0.015	0.018	0.103	0.571	0.944	0.000	0.005
%RSD		20.950	24.320	26.770	28.820	50.480	43.500	0.000	40.590
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:28	68.820%	-0.575	-0.646	71.735%	-0.012	-0.000	-0.007	-2.290
2	18:26:54	70.407%	-0.607	-0.645	73.554%	-0.021	-0.022	-0.007	-2.312
3	18:27:21	71.352%	-0.572	-0.649	73.821%	-0.028	-0.010	-0.007	-2.321
X		70.193%	-0.585	-0.647	73.036%	-0.021	-0.011	-0.007	-2.307
σ		1.280%	0.019	0.002	1.135%	0.008	0.011	0.000	0.016
%RSD		1.823	3.288	0.338	1.554	38.840	101.200	0.000	0.698
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:26:28	69.197%	0.096	-0.001	0.016	-0.012	0.027	74.669%	75.256%
2	18:26:54	71.651%	0.068	0.014	0.006	0.011	0.008	75.813%	76.242%
3	18:27:21	73.479%	0.084	0.005	-0.003	-0.021	0.021	76.925%	77.838%
X		71.442%	0.083	0.006	0.006	-0.008	0.019	75.802%	76.445%
σ		2.149%	0.014	0.007	0.009	0.016	0.010	1.128%	1.303%
%RSD		3.008	17.010	125.500	142.500	218.800	51.850	1.488	1.704
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:26:28	0.002	-0.001	-0.004	-0.010	-0.006	77.920%		
2	18:26:54	-0.002	0.002	0.008	-0.009	-0.001	79.671%		
3	18:27:21	0.001	0.001	0.006	-0.003	0.003	81.432%		
X		0.000	0.001	0.004	-0.007	-0.001	79.675%		
σ		0.002	0.001	0.007	0.004	0.004	1.756%		
%RSD		922.100	193.300	186.500	50.250	324.800	2.204		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:30:45	70.289%	0.068	77.760	78.290	0.000	5239.000	45.790	49.760
2	18:31:12	72.223%	0.066	76.890	74.680	0.000	5290.000	49.300	50.240
3	18:31:38	72.062%	0.043	72.370	80.800	0.000	5285.000	49.150	51.930
X		71.525%	0.059	75.670	77.920	0.000	5271.000	48.080	50.640
σ		1.073%	0.014	2.897	3.078	0.000	28.130	1.981	1.140
%RSD		1.501	24.290	3.828	3.950	0.000	0.534	4.121	2.251
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:30:45	9.342	901.100	0.000	-29.510	164.900	198.800	62.916%	2.987
2	18:31:12	9.251	918.700	0.000	-27.450	204.400	199.000	63.594%	2.076
3	18:31:38	9.573	899.400	0.000	-31.080	282.200	211.700	62.796%	1.771
X		9.389	906.400	0.000	-29.350	217.200	203.200	63.102%	2.278
σ		0.166	10.640	0.000	1.823	59.710	7.399	0.430%	0.633
%RSD		1.769	1.174	0.000	6.212	27.500	3.642	0.682	27.770
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:30:45	0.292	0.600	0.203	-7.528	0.842	-0.001	0.988	0.576
2	18:31:12	-0.057	0.552	0.191	-8.375	1.976	0.020	1.017	0.472
3	18:31:38	0.279	0.509	0.164	-8.098	-0.909	0.013	0.992	0.494
X		0.171	0.553	0.186	-8.000	0.636	0.011	0.999	0.514
σ		0.197	0.046	0.020	0.432	1.453	0.011	0.016	0.055
%RSD		115.300	8.264	10.620	5.398	228.500	100.800	1.565	10.690
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:30:45	0.361	6.825	7.448	0.050	-1.203	-1.966	0.000	0.092
2	18:31:12	0.329	7.681	6.825	-0.545	-0.683	-3.988	0.000	0.089
3	18:31:38	0.290	7.585	7.560	-0.099	-1.624	-0.427	0.000	0.105
X		0.327	7.364	7.278	-0.198	-1.170	-2.127	0.000	0.095
σ		0.036	0.469	0.396	0.309	0.472	1.786	0.000	0.008
%RSD		11.010	6.366	5.442	156.300	40.300	83.960	0.000	8.524
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:30:45	63.764%	-0.565	-0.630	65.880%	-0.017	-0.003	0.001	-2.327
2	18:31:12	65.545%	-0.613	-0.630	68.137%	-0.008	-0.014	0.009	-2.274
3	18:31:38	63.412%	-0.578	-0.622	66.055%	-0.021	-0.020	0.009	-2.325
X		64.240%	-0.585	-0.627	66.691%	-0.016	-0.012	0.006	-2.308
σ		1.143%	0.025	0.005	1.256%	0.007	0.009	0.005	0.030
%RSD		1.779	4.258	0.723	1.883	42.250	69.570	71.580	1.281
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:30:45	63.948%	0.354	0.030	0.013	0.233	0.285	70.686%	71.120%
2	18:31:12	65.999%	0.358	0.012	0.020	0.214	0.245	73.948%	73.620%
3	18:31:38	64.704%	0.441	0.017	0.032	0.187	0.233	71.188%	71.409%
X		64.884%	0.384	0.020	0.022	0.211	0.255	71.941%	72.049%
σ		1.037%	0.049	0.009	0.010	0.023	0.027	1.756%	1.368%
%RSD		1.599	12.760	45.570	45.110	10.840	10.570	2.442	1.898
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:30:45	-0.000	0.006	0.023	0.022	0.020	80.361%		
2	18:31:12	0.006	0.002	0.013	0.008	0.016	78.126%		
3	18:31:38	0.002	0.004	0.044	0.006	0.025	76.243%		
X		0.003	0.004	0.027	0.012	0.020	78.243%		
σ		0.003	0.002	0.016	0.009	0.005	2.061%		
%RSD		110.500	49.480	59.070	74.800	23.330	2.634		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:35:01	65.642%	49.500	959.600	979.300	0.000	47300.000	44980.000	45230.000	
2	18:35:27	65.883%	50.650	997.100	1027.000	0.000	48790.000	46840.000	47150.000	
3	18:35:54	68.195%	51.820	956.000	993.900	0.000	47450.000	45750.000	46080.000	
X		66.574%	50.660	970.900	1000.000	0.000	47850.000	45860.000	46150.000	
		σ	1.410%	1.164	22.760	24.660	0.000	818.800	931.900	962.100
		%RSD	2.117	2.299	2.344	2.465	0.000	1.711	2.032	2.085
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:35:01	1858.000	9567.000	0.000	49210.000	49060.000	47610.000	57.697%	1016.000	
2	18:35:27	1936.000	9899.000	0.000	51250.000	51410.000	49800.000	58.050%	1047.000	
3	18:35:54	1909.000	9674.000	0.000	50990.000	51220.000	49240.000	59.163%	1038.000	
X		1901.000	9713.000	0.000	50480.000	50570.000	48880.000	58.303%	1034.000	
		σ	39.470	169.700	0.000	1108.000	1308.000	0.765%	16.180	
		%RSD	2.076	1.747	0.000	2.196	2.586	1.312	1.565	
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:35:01	497.800	195.400	464.000	1017.000	1097.000	507.600	500.400	252.500	
2	18:35:27	512.400	203.000	473.400	1056.000	1132.000	521.200	513.900	259.600	
3	18:35:54	509.700	203.200	474.400	1059.000	1117.000	522.800	513.200	256.500	
X		506.600	200.500	470.600	1044.000	1115.000	517.200	509.200	256.200	
		σ	7.804	4.452	5.738	23.140	17.330	8.340	7.572	3.533
		%RSD	1.540	2.220	1.219	2.216	1.554	1.613	1.487	1.379
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:35:01	247.700	487.600	481.000	39.190	9.581	7.209	0.000	1042.000	
2	18:35:27	256.500	506.400	495.900	39.120	10.160	10.690	0.000	1076.000	
3	18:35:54	252.900	501.200	489.500	39.240	9.039	6.088	0.000	1065.000	
X		252.300	498.400	488.800	39.180	9.594	7.994	0.000	1061.000	
		σ	4.429	9.713	7.497	0.060	0.562	2.397	0.000	17.740
		%RSD	1.755	1.949	1.534	0.154	5.860	29.990	0.000	1.673
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:35:01	58.531%	1060.000	1067.000	58.781%	52.860	52.870	52.150	37.370	
2	18:35:27	60.026%	1090.000	1106.000	59.557%	54.110	52.030	52.550	38.850	
3	18:35:54	61.215%	1107.000	1097.000	60.206%	53.420	52.430	53.480	38.890	
X		59.924%	1086.000	1090.000	59.514%	53.460	52.440	52.730	38.370	
		σ	1.345%	23.790	20.510	0.714%	0.627	0.417	0.683	0.866
		%RSD	2.244	2.191	1.882	1.199	1.172	0.794	1.296	2.256
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:35:01	58.113%	2177.000	517.700	523.000	2006.000	2064.000	67.436%	67.067%	
2	18:35:27	59.298%	2239.000	529.400	531.300	2045.000	2136.000	69.216%	69.117%	
3	18:35:54	59.826%	2261.000	537.200	533.700	2058.000	2152.000	69.518%	69.848%	
X		59.079%	2226.000	528.100	529.300	2036.000	2118.000	68.723%	68.677%	
		σ	0.877%	43.830	9.831	5.612	27.360	47.070	1.125%	1.441%
		%RSD	1.485	1.970	1.862	1.060	1.343	2.223	1.638	2.099
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	18:35:01	51.800	49.990	21.270	20.710	20.980	65.513%			
2	18:35:27	53.880	51.420	21.680	21.220	21.380	67.103%			
3	18:35:54	54.050	51.300	21.700	21.240	21.640	68.030%			
X		53.240	50.900	21.550	21.060	21.330	66.882%			
		σ	1.255	0.792	0.239	0.298	0.335	1.273%		
		%RSD	2.357	1.556	1.108	1.417	1.570	1.904		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:15	65.114%	1.882	731.100	755.800	0.000	106900.000	5095.000	5090.000
2	18:39:42	65.746%	2.203	740.500	776.700	0.000	107700.000	5189.000	5186.000
3	18:40:08	66.042%	2.665	763.800	789.100	0.000	109300.000	5308.000	5275.000
X		65.634%	2.250	745.100	773.900	0.000	107900.000	5197.000	5184.000
σ		0.474%	0.394	16.870	16.830	0.000	1223.000	106.800	92.210
%RSD		0.722	17.490	2.264	2.175	0.000	1.133	2.054	1.779
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:15	34140.000	54970.000	0.000	8020.000	11450.000	11040.000	58.345%	143.900
2	18:39:42	34820.000	55560.000	0.000	8388.000	11870.000	11380.000	60.031%	142.100
3	18:40:08	35360.000	56000.000	0.000	8414.000	12250.000	11830.000	60.004%	151.000
X		34770.000	55510.000	0.000	8274.000	11860.000	11420.000	59.460%	145.700
σ		612.600	519.200	0.000	220.500	400.300	394.000	0.966%	4.706
%RSD		1.762	0.935	0.000	2.665	3.376	3.452	1.624	3.231
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:15	48.230	41.920	488.300	45840.000	42930.000	11.190	39.040	56.300
2	18:39:42	50.620	43.230	498.400	46800.000	43670.000	11.310	40.610	55.720
3	18:40:08	51.740	44.280	505.400	47500.000	44580.000	11.660	39.630	56.710
X		50.200	43.150	497.400	46720.000	43730.000	11.390	39.760	56.240
σ		1.788	1.184	8.593	832.100	824.200	0.246	0.794	0.495
%RSD		3.562	2.743	1.728	1.781	1.885	2.159	1.997	0.880
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:15	53.820	143.200	143.600	10.310	-0.983	-10.320	0.000	74.670
2	18:39:42	54.030	148.800	147.400	9.741	-2.094	-10.630	0.000	75.340
3	18:40:08	54.950	150.000	147.600	9.087	-3.169	-10.560	0.000	75.700
X		54.260	147.300	146.200	9.712	-2.082	-10.500	0.000	75.240
σ		0.600	3.660	2.241	0.611	1.093	0.164	0.000	0.524
%RSD		1.105	2.485	1.533	6.288	52.500	1.561	0.000	0.696
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:15	75.273%	6.552	6.544	56.146%	0.124	0.134	0.124	-2.095
2	18:39:42	78.511%	5.208	5.598	58.578%	0.135	0.165	0.058	-2.150
3	18:40:08	80.356%	4.483	5.043	59.231%	0.145	0.118	0.242	-2.082
X		78.047%	5.414	5.728	57.985%	0.135	0.139	0.141	-2.109
σ		2.573%	1.050	0.759	1.625%	0.011	0.024	0.094	0.036
%RSD		3.297	19.390	13.250	2.803	8.004	17.330	66.320	1.714
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:39:15	58.411%	7.191	0.561	0.549	167.200	168.300	68.341%	68.339%
2	18:39:42	58.129%	5.857	0.645	0.614	172.900	175.700	70.254%	70.275%
3	18:40:08	57.875%	4.604	0.657	0.694	173.500	182.400	71.883%	70.786%
X		58.138%	5.884	0.621	0.619	171.200	175.500	70.159%	69.800%
σ		0.268%	1.293	0.052	0.073	3.453	7.081	1.773%	1.291%
%RSD		0.460	21.980	8.400	11.740	2.017	4.036	2.527	1.849
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:39:15	0.480	0.454	25.450	23.650	24.200	66.501%		
2	18:39:42	0.419	0.417	27.350	24.530	25.690	65.929%		
3	18:40:08	0.401	0.388	27.950	24.820	26.130	66.030%		
X		0.433	0.419	26.920	24.330	25.340	66.154%		
σ		0.041	0.033	1.306	0.610	1.008	0.305%		
%RSD		9.469	7.891	4.850	2.506	3.978	0.461		

180-40630-C-1-C SD@5 1/29/2015 6:43:04 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:43:30	69.552%	0.790	144.700	154.300	0.000	21950.000	1032.000	1027.000	
2	18:43:56	72.448%	0.665	155.300	154.000	0.000	21950.000	1047.000	1038.000	
3	18:44:22	72.190%	0.738	153.300	152.100	0.000	22140.000	1083.000	1053.000	
X		71.397%	0.731	151.100	153.500	0.000	22010.000	1054.000	1040.000	
		$\sigma$	1.603%	0.063	5.621	1.178	0.000	107.700	26.080	12.900
		%RSD	2.245	8.603	3.721	0.768	0.000	0.489	2.475	1.241
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:43:30	6962.000	11230.000	0.000	1625.000	2526.000	2210.000	63.193%	27.410	
2	18:43:56	7106.000	11280.000	0.000	1638.000	2492.000	2392.000	63.424%	30.690	
3	18:44:22	7207.000	11340.000	0.000	1678.000	2472.000	2409.000	64.283%	30.000	
X		7092.000	11290.000	0.000	1647.000	2497.000	2337.000	63.633%	29.370	
		$\sigma$	122.600	52.470	0.000	27.660	27.480	110.300	0.574%	1.725
		%RSD	1.729	0.465	0.000	1.680	1.101	4.721	0.903	5.874
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:43:30	10.500	8.937	101.300	9865.000	8701.000	2.469	8.102	12.330	
2	18:43:56	10.880	9.181	105.800	10290.000	9097.000	2.421	8.972	12.870	
3	18:44:22	11.170	9.255	104.900	10240.000	9089.000	2.494	9.008	12.920	
X		10.850	9.125	104.000	10130.000	8962.000	2.461	8.694	12.710	
		$\sigma$	0.335	0.167	2.369	231.400	226.400	0.037	0.513	0.325
		%RSD	3.089	1.826	2.278	2.284	2.526	1.503	5.903	2.561
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:43:30	12.060	33.220	32.420	1.930	-0.539	-2.297	0.000	18.040	
2	18:43:56	12.720	33.750	33.320	1.564	-1.462	-5.199	0.000	18.410	
3	18:44:22	12.480	33.810	34.440	2.456	-0.595	-1.901	0.000	18.820	
X		12.420	33.590	33.390	1.983	-0.865	-3.132	0.000	18.420	
		$\sigma$	0.337	0.322	1.013	0.448	0.518	1.801	0.000	0.394
		%RSD	2.715	0.958	3.033	22.600	59.830	57.500	0.000	2.137
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:43:30	67.429%	0.320	0.323	64.618%	0.012	0.014	0.035	-2.346	
2	18:43:56	69.411%	0.329	0.287	65.532%	-0.005	0.009	0.026	-2.341	
3	18:44:22	70.093%	0.436	0.280	66.282%	0.007	-0.006	0.001	-2.286	
X		68.978%	0.362	0.297	65.477%	0.005	0.006	0.020	-2.324	
		$\sigma$	1.383%	0.064	0.023	0.833%	0.009	0.010	0.017	0.033
		%RSD	2.006	17.800	7.773	1.273	195.900	174.100	85.360	1.428
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	18:43:30	64.006%	0.628	0.109	0.077	33.790	35.010	71.326%	71.766%	
2	18:43:56	65.766%	0.560	0.097	0.092	34.030	35.200	72.720%	72.601%	
3	18:44:22	65.254%	0.653	0.101	0.123	34.730	36.120	74.048%	73.133%	
X		65.009%	0.613	0.102	0.097	34.190	35.440	72.698%	72.500%	
		$\sigma$	0.905%	0.048	0.006	0.023	0.487	0.597	1.361%	0.689%
		%RSD	1.392	7.848	6.069	23.840	1.425	1.683	1.872	0.951
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	18:43:30	0.069	0.078	4.964	4.636	4.712	72.533%			
2	18:43:56	0.084	0.078	5.317	4.698	4.963	73.096%			
3	18:44:22	0.071	0.076	5.472	4.814	5.025	73.990%			
X		0.075	0.077	5.251	4.716	4.900	73.207%			
		$\sigma$	0.008	0.001	0.260	0.090	0.166	0.735%		
		%RSD	10.850	1.217	4.957	1.916	3.384	1.004		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:44	65.475%	54.760	1683.000	1759.000	0.000	149300.000	51090.000	51250.000
2	18:48:11	66.112%	50.860	1724.000	1800.000	0.000	153800.000	52870.000	52960.000
3	18:48:38	68.577%	54.880	1714.000	1782.000	0.000	152300.000	52930.000	53040.000
X		66.721%	53.500	1707.000	1780.000	0.000	151800.000	52290.000	52420.000
σ		1.639%	2.290	21.440	20.150	0.000	2302.000	1045.000	1012.000
%RSD		2.456	4.281	1.256	1.132	0.000	1.516	1.999	1.931
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:44	59870.000	83510.000	0.000	61260.000	58320.000	57100.000	60.602%	1131.000
2	18:48:11	62070.000	85070.000	0.000	61680.000	60470.000	59740.000	61.263%	1156.000
3	18:48:38	61890.000	84520.000	0.000	62900.000	62630.000	62230.000	61.704%	1176.000
X		61280.000	84370.000	0.000	61940.000	60470.000	59690.000	61.190%	1154.000
σ		1221.000	792.700	0.000	851.600	2153.000	2564.000	0.555%	22.530
%RSD		1.993	0.940	0.000	1.375	3.561	4.296	0.906	1.952
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:44	530.500	242.000	916.600	49240.000	46640.000	457.000	474.200	272.900
2	18:48:11	545.300	247.600	959.000	50780.000	48710.000	468.800	492.400	276.800
3	18:48:38	554.900	253.100	966.100	51500.000	49340.000	473.600	494.700	281.700
X		543.500	247.600	947.300	50510.000	48230.000	466.500	487.100	277.100
σ		12.310	5.532	26.760	1153.000	1410.000	8.560	11.270	4.426
%RSD		2.264	2.235	2.825	2.283	2.924	1.835	2.313	1.597
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:44	266.400	547.000	539.300	42.110	5.460	-2.255	0.000	899.400
2	18:48:11	272.000	559.200	549.100	42.520	5.551	-3.535	0.000	915.500
3	18:48:38	273.300	564.600	548.400	41.320	5.897	-3.420	0.000	915.400
X		270.600	556.900	545.600	41.980	5.636	-3.070	0.000	910.100
σ		3.642	9.037	5.448	0.610	0.230	0.708	0.000	9.243
%RSD		1.346	1.623	0.999	1.452	4.085	23.060	0.000	1.016
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:44	76.802%	908.500	958.700	57.356%	53.540	52.160	51.780	38.240
2	18:48:11	80.017%	939.200	994.900	58.551%	52.390	51.650	53.810	38.120
3	18:48:38	82.551%	936.700	1018.000	58.737%	52.550	51.860	53.560	37.940
X		79.790%	928.100	990.600	58.215%	52.830	51.890	53.050	38.100
σ		2.881%	17.000	29.960	0.750%	0.626	0.258	1.107	0.150
%RSD		3.611	1.831	3.024	1.288	1.185	0.496	2.087	0.395
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:44	56.195%	2222.000	454.000	455.800	2224.000	2319.000	68.685%	69.588%
2	18:48:11	59.186%	2209.000	459.600	450.900	2241.000	2307.000	71.103%	72.434%
3	18:48:38	59.836%	2245.000	462.900	456.600	2273.000	2354.000	73.911%	72.887%
X		58.406%	2226.000	458.800	454.400	2246.000	2327.000	71.233%	71.637%
σ		1.942%	18.270	4.491	3.125	24.990	24.640	2.616%	1.788%
%RSD		3.325	0.821	0.979	0.688	1.113	1.059	3.672	2.497
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:47:44	52.240	50.330	49.490	46.150	47.850	64.514%		
2	18:48:11	52.200	49.820	48.320	46.530	47.400	68.255%		
3	18:48:38	54.370	52.090	51.180	47.130	49.530	66.411%		
X		52.940	50.750	49.660	46.610	48.260	66.393%		
σ		1.243	1.187	1.437	0.494	1.120	1.871%		
%RSD		2.348	2.339	2.894	1.060	2.321	2.818		

180-40630-C-1-E MSD 1/29/2015 6:51:33 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:00	65.488%	51.820	1685.000	1758.000	0.000	154100.000	51570.000	51510.000
2	18:52:26	66.864%	51.670	1750.000	1785.000	0.000	154700.000	51910.000	52340.000
3	18:52:53	69.300%	51.280	1718.000	1747.000	0.000	152600.000	51830.000	51880.000
X		67.217%	51.590	1718.000	1764.000	0.000	153800.000	51770.000	51910.000
σ		1.931%	0.280	32.820	19.730	0.000	1074.000	177.800	415.000
%RSD		2.872	0.543	1.911	1.119	0.000	0.698	0.343	0.799
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:00	59690.000	84770.000	0.000	60370.000	58830.000	59190.000	60.288%	1112.000
2	18:52:26	60340.000	84690.000	0.000	61600.000	61100.000	60080.000	62.150%	1137.000
3	18:52:53	60260.000	83710.000	0.000	61700.000	61960.000	60310.000	62.503%	1148.000
X		60100.000	84390.000	0.000	61220.000	60630.000	59860.000	61.647%	1132.000
σ		352.300	588.000	0.000	741.500	1613.000	594.800	1.190%	18.220
%RSD		0.586	0.697	0.000	1.211	2.661	0.994	1.931	1.609
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:00	527.300	238.600	939.200	50570.000	48210.000	445.500	469.600	266.800
2	18:52:26	526.200	241.500	949.600	51200.000	49000.000	450.200	471.200	269.600
3	18:52:53	534.300	244.200	963.900	52050.000	49580.000	454.600	478.200	271.200
X		529.300	241.400	950.900	51280.000	48930.000	450.100	473.000	269.200
σ		4.401	2.763	12.440	744.100	691.100	4.577	4.613	2.246
%RSD		0.832	1.144	1.309	1.451	1.412	1.017	0.975	0.834
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:00	259.900	533.800	522.700	41.770	6.461	-4.005	0.000	868.400
2	18:52:26	261.900	545.400	529.900	39.660	6.451	-3.534	0.000	865.800
3	18:52:53	263.300	542.200	540.300	41.190	4.215	-3.289	0.000	852.900
X		261.700	540.500	531.000	40.870	5.709	-3.609	0.000	862.400
σ		1.725	5.995	8.876	1.092	1.294	0.364	0.000	8.339
%RSD		0.659	1.109	1.672	2.671	22.660	10.080	0.000	0.967
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:00	78.763%	905.400	982.900	57.224%	50.180	49.920	50.340	34.560
2	18:52:26	82.123%	907.800	985.200	59.466%	51.180	50.710	50.910	39.000
3	18:52:53	83.580%	931.600	1006.000	59.506%	50.880	51.110	51.020	37.640
X		81.488%	914.900	991.500	58.732%	50.750	50.580	50.760	37.070
σ		2.470%	14.490	12.910	1.307%	0.514	0.604	0.365	2.273
%RSD		3.031	1.584	1.302	2.225	1.013	1.194	0.718	6.133
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:52:00	58.164%	2153.000	438.600	438.100	2173.000	2198.000	70.048%	70.001%
2	18:52:26	57.959%	2259.000	456.200	456.700	2164.000	2276.000	72.721%	72.607%
3	18:52:53	58.457%	2284.000	457.600	464.700	2231.000	2322.000	72.359%	73.648%
X		58.193%	2232.000	450.800	453.200	2189.000	2265.000	71.709%	72.085%
σ		0.250%	69.240	10.580	13.680	36.190	62.270	1.450%	1.879%
%RSD		0.430	3.102	2.348	3.018	1.653	2.749	2.022	2.607
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:52:00	48.400	47.810	47.920	45.360	46.540	66.514%		
2	18:52:26	51.750	50.600	51.140	47.820	49.900	65.043%		
3	18:52:53	52.090	50.490	51.530	48.010	49.790	65.739%		
X		50.750	49.630	50.200	47.060	48.740	65.765%		
σ		2.041	1.580	1.984	1.478	1.910	0.736%		
%RSD		4.022	3.183	3.952	3.140	3.919	1.119		



CCV 1467888 1/29/2015 6:55:48 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:56:15	73.614%	97.950	114.300	106.900	0.000	48460.000	46880.000	46970.000
2	18:56:42	75.380%	104.000	102.000	108.600	0.000	48370.000	47570.000	47620.000
3	18:57:08	73.481%	101.600	103.300	110.200	0.000	49220.000	48430.000	48360.000
X		74.159%	101.162%	106.557%	108.576%	0.000	97.373%	95.256%	95.304%
σ		1.060%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.430	2.986	6.353	1.532	0.000	0.960	1.639	1.459
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:56:15	460.500	5388.000	0.000	49220.000	47790.000	47950.000	69.815%	98.630
2	18:56:42	471.000	5420.000	0.000	50480.000	48680.000	47740.000	70.519%	102.100
3	18:57:08	493.200	5564.000	0.000	51490.000	50840.000	49280.000	70.334%	100.800
X		94.982%	109.144%	0.000	100.785%	98.205%	96.650%	70.223%	100.507%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.365%	n/a
%RSD		3.509	1.726	0.000	2.258	3.194	1.733	0.520	1.733
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:56:15	93.960	94.830	455.400	24460.000	22570.000	96.340	95.450	96.370
2	18:56:42	96.660	97.620	465.600	25360.000	23500.000	99.250	101.100	100.600
3	18:57:08	96.680	97.290	466.400	25490.000	23560.000	98.800	100.100	101.400
X		95.767%	96.582%	92.492%	100.410%	92.836%	98.129%	98.906%	99.472%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.633	1.582	1.329	2.243	2.382	1.598	3.069	2.726
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:56:15	97.680	98.480	97.940	98.740	99.150	96.490	0.000	93.640
2	18:56:42	98.660	102.300	102.200	101.000	93.540	101.400	0.000	97.590
3	18:57:08	99.160	103.400	101.500	101.000	99.900	100.500	0.000	96.960
X		98.497%	101.391%	100.536%	100.223%	97.528%	99.481%	0.000	96.064%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.766	2.537	2.265	1.283	3.566	2.640	0.000	2.209
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:56:15	68.844%	96.900	97.180	68.385%	99.200	99.420	97.720	93.880
2	18:56:42	69.388%	98.630	98.340	70.604%	100.700	98.450	99.540	96.770
3	18:57:08	70.704%	101.600	101.200	70.910%	100.500	100.200	101.200	98.430
X		69.645%	99.039%	98.895%	69.966%	100.113%	99.348%	99.500%	96.359%
σ		0.956%	n/a	n/a	1.378%	n/a	n/a	n/a	n/a
%RSD		1.373	2.391	2.075	1.970	0.799	0.864	1.768	2.388
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:56:15	69.594%	98.200	95.160	95.850	95.610	96.280	75.415%	75.377%
2	18:56:42	69.704%	102.500	98.150	99.870	98.620	100.600	75.275%	77.139%
3	18:57:08	68.749%	102.900	98.590	101.900	97.490	102.800	76.741%	78.210%
X		69.349%	101.203%	97.298%	99.201%	97.242%	99.877%	75.810%	76.909%
σ		0.523%	n/a	n/a	n/a	n/a	n/a	0.809%	1.430%
%RSD		0.754	2.583	1.919	3.100	1.562	3.301	1.067	1.860
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	18:56:15	103.700	103.100	102.900	103.900	104.000	70.087%		
2	18:56:42	108.400	105.200	108.900	108.200	108.100	69.411%		
3	18:57:08	109.600	105.500	109.900	107.900	109.200	69.663%		
X		107.253%	104.592%	107.222%	106.673%	107.125%	69.720%		
σ		n/a	n/a	n/a	n/a	n/a	0.342%		
%RSD		2.881	1.257	3.542	2.235	2.570	0.490		

CCB4 1/29/2015 7:03:12 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:38	73.747%	0.041	5.788	4.739	0.000	-76.430	-1.238	-0.259
2	19:04:05	75.378%	0.247	4.773	4.381	0.000	-78.270	-0.042	0.290
3	19:04:31	78.453%	0.149	5.287	3.900	0.000	-77.450	-2.177	-0.491
X		75.859%	0.146	5.282	4.340	0.000	-77.380	-1.152	-0.153
σ		2.389%	0.103	0.507	0.421	0.000	0.921	1.070	0.401
%RSD		3.150	70.560	9.604	9.696	0.000	1.190	92.870	261.800
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:38	0.956	-2.567	0.000	-50.050	43.200	31.090	67.647%	-0.461
2	19:04:05	1.002	-6.558	0.000	-52.400	44.820	27.320	68.893%	-0.413
3	19:04:31	1.013	-5.643	0.000	-54.680	22.160	34.360	69.997%	-0.505
X		0.990	-4.923	0.000	-52.380	36.720	30.920	68.845%	-0.460
σ		0.030	2.091	0.000	2.312	12.640	3.522	1.176%	0.046
%RSD		3.022	42.480	0.000	4.414	34.420	11.390	1.708	10.050
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:38	0.042	0.036	0.160	1.251	7.582	-0.001	0.118	0.073
2	19:04:05	0.010	0.013	0.166	-1.022	0.450	0.011	0.005	0.080
3	19:04:31	-0.079	-0.022	0.145	-2.535	9.340	0.027	0.176	0.081
X		-0.009	0.009	0.157	-0.769	5.790	0.012	0.100	0.078
σ		0.063	0.029	0.011	1.905	4.708	0.014	0.087	0.005
%RSD		697.900	335.300	6.849	247.800	81.310	112.800	87.390	5.863
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:38	0.109	0.291	0.401	-0.036	-0.207	-0.957	0.000	0.051
2	19:04:05	0.095	0.396	0.438	-0.200	-1.673	-2.306	0.000	0.055
3	19:04:31	0.130	0.416	0.420	-0.425	-1.907	-2.121	0.000	0.057
X		0.111	0.368	0.420	-0.220	-1.262	-1.795	0.000	0.054
σ		0.017	0.067	0.019	0.195	0.922	0.732	0.000	0.003
%RSD		15.440	18.300	4.487	88.780	73.030	40.750	0.000	5.564
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:38	67.775%	-0.100	-0.066	70.351%	0.007	-0.012	0.016	-2.277
2	19:04:05	70.161%	-0.202	-0.190	72.619%	-0.020	-0.001	-0.007	-2.263
3	19:04:31	70.621%	-0.075	-0.091	72.981%	-0.010	-0.004	0.008	-2.235
X		69.519%	-0.126	-0.116	71.984%	-0.008	-0.005	0.006	-2.259
σ		1.528%	0.067	0.065	1.426%	0.014	0.005	0.012	0.021
%RSD		2.198	53.720	56.450	1.981	184.400	100.400	212.900	0.939
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:03:38	68.367%	0.370	0.201	0.123	0.062	0.060	73.895%	73.196%
2	19:04:05	70.639%	0.404	0.155	0.172	0.012	0.059	73.303%	75.756%
3	19:04:31	71.675%	0.440	0.177	0.184	0.003	0.043	76.571%	75.727%
X		70.227%	0.404	0.178	0.160	0.026	0.054	74.590%	74.893%
σ		1.692%	0.035	0.023	0.032	0.032	0.009	1.741%	1.470%
%RSD		2.409	8.567	12.950	20.250	124.900	17.100	2.334	1.963
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:03:38	0.023	0.016	0.018	0.012	0.016	75.133%		
2	19:04:05	0.011	0.013	0.022	0.024	0.020	76.800%		
3	19:04:31	0.019	0.014	0.015	0.008	0.007	79.032%		
X		0.018	0.015	0.018	0.015	0.014	76.988%		
σ		0.006	0.002	0.003	0.008	0.007	1.956%		
%RSD		33.970	11.030	17.550	56.840	47.090	2.541		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:59	63.970%	4.872	708.100	734.200	0.000	96930.000	9470.000	9509.000
2	19:08:26	65.924%	4.180	731.900	756.900	0.000	98080.000	9735.000	9715.000
3	19:08:52	67.634%	4.361	708.200	741.000	0.000	96870.000	9630.000	9704.000
X		65.843%	4.471	716.100	744.100	0.000	97290.000	9612.000	9643.000
σ		1.833%	0.359	13.690	11.680	0.000	680.900	133.200	116.100
%RSD		2.784	8.031	1.912	1.570	0.000	0.700	1.385	1.204
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:59	62630.000	72930.000	0.000	12790.000	19550.000	18630.000	60.326%	266.000
2	19:08:26	63740.000	72880.000	0.000	13150.000	20310.000	18900.000	61.909%	274.700
3	19:08:52	63850.000	73110.000	0.000	13160.000	20500.000	19460.000	62.399%	268.200
X		63400.000	72970.000	0.000	13030.000	20120.000	19000.000	61.545%	269.600
σ		677.100	117.900	0.000	209.700	506.400	423.100	1.084%	4.516
%RSD		1.068	0.162	0.000	1.609	2.517	2.227	1.761	1.675
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:59	89.120	74.540	925.400	87430.000	78780.000	22.470	67.530	86.050
2	19:08:26	90.920	74.470	943.300	89580.000	80180.000	23.270	67.870	88.740
3	19:08:52	89.860	76.020	953.100	90100.000	81790.000	23.320	67.740	88.070
X		89.970	75.010	940.600	89040.000	80250.000	23.020	67.710	87.620
σ		0.906	0.878	14.060	1414.000	1506.000	0.476	0.173	1.399
%RSD		1.007	1.170	1.495	1.588	1.877	2.069	0.255	1.597
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:59	82.920	198.900	193.700	18.030	-3.212	-12.070	0.000	112.500
2	19:08:26	83.830	208.100	202.900	18.850	-1.870	-13.690	0.000	114.700
3	19:08:52	84.880	208.500	200.300	18.050	-2.018	-11.010	0.000	113.600
X		83.880	205.200	199.000	18.310	-2.367	-12.260	0.000	113.600
σ		0.977	5.413	4.751	0.468	0.736	1.350	0.000	1.136
%RSD		1.165	2.638	2.387	2.557	31.090	11.010	0.000	1.000
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:59	84.050%	4.365	4.886	57.345%	0.229	0.239	0.255	-1.794
2	19:08:26	87.155%	4.403	4.703	59.678%	0.239	0.215	0.339	-1.971
3	19:08:52	88.362%	4.167	4.930	59.004%	0.219	0.232	0.312	-1.839
X		86.522%	4.312	4.840	58.676%	0.229	0.229	0.302	-1.868
σ		2.224%	0.126	0.121	1.201%	0.010	0.013	0.043	0.092
%RSD		2.571	2.930	2.492	2.047	4.518	5.548	14.180	4.922
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:07:59	57.739%	4.634	0.893	0.990	341.900	352.700	69.443%	69.400%
2	19:08:26	59.027%	4.863	0.937	0.910	356.500	365.000	71.337%	72.098%
3	19:08:52	59.229%	4.648	0.814	0.927	357.800	361.200	74.255%	73.429%
X		58.665%	4.715	0.881	0.942	352.100	359.600	71.678%	71.642%
σ		0.808%	0.129	0.063	0.042	8.829	6.309	2.424%	2.053%
%RSD		1.377	2.728	7.101	4.480	2.508	1.754	3.382	2.865
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:07:59	0.717	0.699	49.430	45.280	47.030	65.050%		
2	19:08:26	0.710	0.701	51.070	45.800	48.430	65.563%		
3	19:08:52	0.726	0.662	50.820	45.540	48.420	67.379%		
X		0.718	0.687	50.440	45.540	47.960	65.998%		
σ		0.008	0.022	0.884	0.260	0.804	1.224%		
%RSD		1.148	3.217	1.753	0.571	1.677	1.854		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:12:13	64.760%	2.396	694.200	696.100	0.000	97750.000	4756.000	4737.000	
2	19:12:39	68.532%	2.219	657.500	700.900	0.000	97410.000	4854.000	4813.000	
3	19:13:06	69.170%	2.149	680.400	685.500	0.000	97490.000	4855.000	4867.000	
X		67.487%	2.255	677.400	694.200	0.000	97550.000	4821.000	4806.000	
		$\sigma$	2.383%	0.128	18.540	7.893	0.000	175.500	57.060	65.350
		%RSD	3.531	5.657	2.737	1.137	0.000	0.180	1.184	1.360
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:12:13	29990.000	52000.000	0.000	7389.000	12010.000	11330.000	59.209%	160.100	
2	19:12:39	30340.000	51510.000	0.000	7490.000	12550.000	11480.000	60.839%	159.900	
3	19:13:06	30940.000	52110.000	0.000	7547.000	12580.000	11710.000	61.357%	164.900	
X		30420.000	51880.000	0.000	7475.000	12380.000	11500.000	60.469%	161.700	
		$\sigma$	479.200	319.700	0.000	80.100	322.800	192.700	1.121%	2.851
		%RSD	1.575	0.616	0.000	1.072	2.608	1.675	1.854	1.764
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:12:13	44.190	36.620	496.300	44370.000	41480.000	9.651	32.060	39.550	
2	19:12:39	42.710	37.240	509.400	45790.000	42570.000	9.996	32.910	40.460	
3	19:13:06	43.740	38.540	515.500	46350.000	43720.000	10.090	32.940	40.430	
X		43.550	37.470	507.100	45500.000	42590.000	9.912	32.640	40.150	
		$\sigma$	0.759	0.982	9.802	1023.000	0.230	0.499	0.519	
		%RSD	1.744	2.621	1.933	2.248	2.629	2.322	1.528	1.293
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:12:13	38.490	122.000	119.000	9.723	-2.334	-8.213	0.000	66.380	
2	19:12:39	38.730	124.700	123.600	10.110	-0.887	-10.380	0.000	69.170	
3	19:13:06	38.820	127.800	121.400	11.980	-2.003	-7.636	0.000	69.030	
X		38.680	124.800	121.300	10.600	-1.741	-8.743	0.000	68.190	
		$\sigma$	0.172	2.941	2.295	1.206	0.759	1.447	0.000	1.570
		%RSD	0.445	2.356	1.892	11.380	43.550	16.550	0.000	2.302
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:12:13	70.668%	3.989	4.034	57.564%	0.098	0.071	0.105	-2.023	
2	19:12:39	72.372%	3.986	4.159	59.853%	0.057	0.083	0.228	-2.022	
3	19:13:06	74.670%	3.871	4.343	61.307%	0.081	0.115	0.169	-2.082	
X		72.570%	3.949	4.179	59.575%	0.079	0.090	0.167	-2.043	
		$\sigma$	2.008%	0.068	0.155	1.887%	0.020	0.023	0.062	0.034
		%RSD	2.768	1.715	3.719	3.168	25.940	25.670	36.950	1.688
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:12:13	57.930%	1.798	0.532	0.617	152.400	157.500	69.769%	68.464%	
2	19:12:39	59.343%	1.707	0.534	0.601	161.600	164.000	70.391%	70.393%	
3	19:13:06	61.153%	2.040	0.566	0.550	160.200	164.900	72.314%	72.577%	
X		59.475%	1.849	0.544	0.589	158.100	162.100	70.825%	70.478%	
		$\sigma$	1.616%	0.172	0.019	0.035	4.975	4.040	1.327%	2.058%
		%RSD	2.717	9.319	3.508	5.943	3.147	2.492	1.874	2.920
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	19:12:13	0.336	0.350	19.370	17.710	18.570	64.679%			
2	19:12:39	0.327	0.364	20.390	18.060	19.160	67.164%			
3	19:13:06	0.340	0.333	19.810	18.280	18.980	68.869%			
X		0.334	0.349	19.860	18.020	18.900	66.904%			
		$\sigma$	0.007	0.016	0.509	0.288	2.107%			
		%RSD	2.034	4.477	2.565	1.600	1.622	3.149		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:42	74.403%	0.041	3.966	3.887	0.000	-79.450	-5.823	-4.926
2	19:20:09	75.492%	0.063	3.757	4.149	0.000	-77.800	-5.897	-3.682
3	19:20:35	75.927%	0.063	4.166	4.259	0.000	-74.280	-4.863	-4.401
X		75.274%	0.056	3.963	4.098	0.000	-77.180	-5.528	-4.337
σ		0.785%	0.013	0.205	0.191	0.000	2.638	0.577	0.624
%RSD		1.043	22.900	5.170	4.658	0.000	3.418	10.430	14.400
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:42	4.642	2.877	0.000	-60.960	-1.124	9.825	65.858%	1.795
2	19:20:09	4.885	0.448	0.000	-61.390	24.260	11.760	66.498%	4.314
3	19:20:35	4.716	0.186	0.000	-61.700	-1.535	5.147	67.485%	4.616
X		4.748	1.170	0.000	-61.350	7.202	8.911	66.614%	3.575
σ		0.124	1.484	0.000	0.373	14.780	3.401	0.820%	1.549
%RSD		2.617	126.800	0.000	0.607	205.200	38.160	1.231	43.320
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:42	0.263	0.153	0.050	0.544	7.802	-0.021	0.046	0.277
2	19:20:09	0.042	0.114	0.075	0.050	4.353	-0.008	-0.089	0.463
3	19:20:35	0.195	0.126	0.127	-0.122	1.731	-0.022	0.044	0.485
X		0.167	0.131	0.084	0.157	4.628	-0.017	0.000	0.408
σ		0.113	0.020	0.039	0.346	3.045	0.008	0.077	0.114
%RSD		67.840	15.040	46.610	219.800	65.790	45.760	19430.000	27.920
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:42	0.130	0.520	0.500	-0.289	-1.612	-0.659	0.000	0.046
2	19:20:09	0.187	0.746	0.481	0.096	-1.190	-0.359	0.000	0.049
3	19:20:35	0.273	0.448	0.580	-0.346	-0.800	-1.830	0.000	0.043
X		0.197	0.571	0.520	-0.180	-1.201	-0.949	0.000	0.046
σ		0.072	0.155	0.052	0.241	0.406	0.778	0.000	0.003
%RSD		36.660	27.210	10.070	133.800	33.810	81.920	0.000	5.798
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:42	66.678%	-0.608	-0.635	68.647%	-0.032	-0.021	0.001	-2.291
2	19:20:09	68.246%	-0.591	-0.637	70.107%	-0.021	-0.017	-0.007	-2.367
3	19:20:35	69.329%	-0.575	-0.658	71.813%	-0.016	-0.028	-0.007	-2.339
X		68.084%	-0.591	-0.643	70.189%	-0.023	-0.022	-0.005	-2.332
σ		1.333%	0.016	0.013	1.585%	0.008	0.005	0.005	0.039
%RSD		1.957	2.769	1.960	2.258	35.530	23.820	100.900	1.653
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:19:42	67.062%	0.008	0.002	-0.008	0.039	0.085	72.326%	72.195%
2	19:20:09	67.800%	0.062	-0.005	-0.002	0.021	0.143	74.477%	74.430%
3	19:20:35	69.197%	0.066	-0.003	0.009	0.036	0.063	76.006%	75.544%
X		68.020%	0.045	-0.002	-0.000	0.032	0.097	74.270%	74.056%
σ		1.084%	0.032	0.004	0.009	0.010	0.042	1.849%	1.705%
%RSD		1.594	71.170	182.200	2098.000	29.900	42.700	2.490	2.303
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:19:42	0.001	0.005	0.005	0.004	0.006	74.874%		
2	19:20:09	0.002	0.000	0.007	-0.007	0.002	74.301%		
3	19:20:35	0.006	0.004	0.008	0.019	0.014	74.278%		
X		0.003	0.003	0.007	0.006	0.008	74.484%		
σ		0.002	0.002	0.002	0.013	0.006	0.337%		
%RSD		77.570	79.980	22.690	228.400	79.700	0.453		

LCS 180-131915/2-A 1/29/2015 7:23:33 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:23:59	66.558%	47.410	866.300	887.000	0.000	43990.000	42120.000	42130.000	
2	19:24:25	69.422%	46.410	863.500	890.400	0.000	43980.000	42280.000	42670.000	
3	19:24:52	70.567%	44.840	876.700	886.200	0.000	43890.000	42450.000	42430.000	
X		68.849%	46.220	868.800	887.900	0.000	43950.000	42280.000	42410.000	
		σ	2.065%	1.297	6.929	2.219	0.000	51.850	164.500	272.900
		%RSD	3.000	2.805	0.798	0.250	0.000	0.118	0.389	0.644
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:23:59	1705.000	8989.000	0.000	46240.000	44710.000	42600.000	62.411%	910.200	
2	19:24:25	1721.000	9058.000	0.000	46760.000	46600.000	44400.000	62.424%	940.400	
3	19:24:52	1720.000	8978.000	0.000	45980.000	46310.000	44290.000	63.208%	942.200	
X		1716.000	9008.000	0.000	46330.000	45870.000	43760.000	62.681%	931.000	
		σ	8.835	43.410	0.000	397.500	1021.000	1009.000	0.456%	17.950
		%RSD	0.515	0.482	0.000	0.858	2.227	2.305	0.728	1.929
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:23:59	439.600	174.100	407.400	903.800	989.700	450.900	444.600	226.000	
2	19:24:25	453.400	180.400	420.900	934.800	994.700	464.800	457.600	231.100	
3	19:24:52	452.700	178.600	420.200	938.900	997.100	464.800	460.500	231.800	
X		448.600	177.700	416.200	925.800	993.800	460.200	454.300	229.600	
		σ	7.766	3.222	7.617	19.190	3.756	8.033	8.454	3.167
		%RSD	1.731	1.813	1.830	2.073	0.378	1.746	1.861	1.379
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:23:59	223.600	449.200	441.300	35.290	8.365	7.338	0.000	927.400	
2	19:24:25	228.200	462.100	454.100	35.690	9.692	8.044	0.000	933.800	
3	19:24:52	229.200	462.300	459.400	35.670	8.075	8.473	0.000	940.600	
X		227.000	457.900	451.600	35.550	8.711	7.952	0.000	933.900	
		σ	2.996	7.496	9.295	0.223	0.862	0.573	0.000	6.589
		%RSD	1.320	1.637	2.058	0.627	9.900	7.204	0.000	0.706
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:23:59	61.966%	835.600	830.400	62.742%	45.930	46.050	46.860	35.010	
2	19:24:25	64.049%	880.800	890.000	63.658%	46.210	46.870	48.420	34.910	
3	19:24:52	64.316%	925.200	927.300	64.726%	46.440	46.830	48.350	34.160	
X		63.444%	880.500	882.500	63.709%	46.190	46.580	47.880	34.690	
		σ	1.286%	44.830	48.880	0.993%	0.255	0.466	0.881	0.464
		%RSD	2.027	5.091	5.539	1.558	0.551	1.000	1.839	1.337
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:23:59	60.423%	2016.000	481.700	484.100	1824.000	1882.000	69.460%	69.492%	
2	19:24:25	61.922%	2032.000	483.000	491.300	1833.000	1894.000	71.824%	71.476%	
3	19:24:52	63.156%	2005.000	483.800	484.000	1824.000	1888.000	71.481%	72.387%	
X		61.833%	2018.000	482.800	486.500	1827.000	1888.000	70.922%	71.118%	
		σ	1.369%	13.640	1.068	4.160	4.843	6.035	1.278%	1.480%
		%RSD	2.214	0.676	0.221	0.855	0.265	0.320	1.802	2.082
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	19:23:59	45.850	43.800	18.740	18.280	18.450	68.836%			
2	19:24:25	47.510	45.410	19.250	18.990	19.010	68.846%			
3	19:24:52	47.570	46.020	19.460	19.210	18.990	69.134%			
X		46.980	45.080	19.150	18.830	18.820	68.939%			
		σ	0.976	1.147	0.371	0.486	0.317	0.169%		
		%RSD	2.077	2.545	1.938	2.582	1.682	0.246		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:17	65.358%	47.820	892.700	907.600	0.000	45960.000	43790.000	43750.000
2	19:28:44	68.120%	46.500	893.000	907.300	0.000	45260.000	43520.000	43600.000
3	19:29:10	67.491%	46.910	913.600	924.400	0.000	45540.000	43430.000	43810.000
X		66.990%	47.080	899.800	913.100	0.000	45590.000	43580.000	43720.000
σ		1.447%	0.675	12.010	9.781	0.000	352.800	188.200	110.100
%RSD		2.161	1.435	1.334	1.071	0.000	0.774	0.432	0.252
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:17	1749.000	9167.000	0.000	47870.000	46860.000	44740.000	59.830%	949.900
2	19:28:44	1745.000	9100.000	0.000	48260.000	46820.000	45440.000	60.625%	965.200
3	19:29:10	1756.000	9083.000	0.000	46990.000	46620.000	45550.000	61.555%	954.800
X		1750.000	9117.000	0.000	47710.000	46770.000	45240.000	60.670%	956.700
σ		5.668	44.250	0.000	652.200	132.000	441.000	0.864%	7.770
%RSD		0.324	0.485	0.000	1.367	0.282	0.975	1.424	0.812
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:17	465.000	183.300	429.700	949.500	1058.000	475.700	474.300	237.300
2	19:28:44	471.400	186.700	435.700	969.000	1047.000	484.300	480.700	244.600
3	19:29:10	467.900	185.300	433.800	958.000	1036.000	479.900	479.000	239.700
X		468.100	185.100	433.100	958.800	1047.000	480.000	478.000	240.600
σ		3.183	1.703	3.055	9.761	10.940	4.270	3.323	3.731
%RSD		0.680	0.920	0.706	1.018	1.045	0.890	0.695	1.551
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:17	236.700	473.100	468.600	38.320	10.370	12.580	0.000	992.100
2	19:28:44	242.600	481.900	482.000	38.770	9.083	10.900	0.000	1014.000
3	19:29:10	239.700	478.200	480.600	38.690	7.027	8.956	0.000	1032.000
X		239.700	477.700	477.100	38.590	8.826	10.810	0.000	1013.000
σ		2.935	4.412	7.352	0.238	1.685	1.814	0.000	19.980
%RSD		1.224	0.924	1.541	0.618	19.090	16.780	0.000	1.973
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:17	57.954%	939.200	913.600	61.939%	47.080	46.970	49.290	34.200
2	19:28:44	58.300%	976.700	951.700	62.409%	47.830	47.520	50.040	36.860
3	19:29:10	58.824%	1012.000	989.300	63.194%	46.930	47.260	49.090	35.130
X		58.359%	976.000	951.500	62.514%	47.280	47.250	49.470	35.400
σ		0.438%	36.500	37.820	0.634%	0.483	0.272	0.500	1.348
%RSD		0.750	3.740	3.974	1.015	1.021	0.577	1.011	3.808
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:17	61.482%	2004.000	478.100	483.900	1837.000	1886.000	67.320%	69.601%
2	19:28:44	60.143%	2101.000	501.900	501.900	1884.000	1969.000	68.461%	70.235%
3	19:29:10	62.567%	2051.000	491.200	492.400	1866.000	1927.000	70.533%	71.026%
X		61.398%	2052.000	490.400	492.700	1862.000	1927.000	68.771%	70.287%
σ		1.214%	48.430	11.910	8.994	23.720	41.200	1.629%	0.714%
%RSD		1.978	2.360	2.428	1.826	1.274	2.138	2.369	1.015
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:28:17	45.680	43.690	18.750	18.170	18.340	70.376%		
2	19:28:44	48.270	46.200	19.520	19.230	19.540	68.235%		
3	19:29:10	47.730	45.860	19.290	19.470	19.170	70.238%		
X		47.230	45.250	19.190	18.950	19.020	69.617%		
σ		1.364	1.362	0.395	0.692	0.618	1.199%		
%RSD		2.889	3.010	2.059	3.649	3.248	1.722		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:34	64.784%	0.182	154.500	159.300	0.000	61230.000	6007.000	5906.000
2	19:33:01	67.221%	0.149	146.700	156.100	0.000	60590.000	5946.000	5969.000
3	19:33:27	65.631%	0.100	149.900	164.400	0.000	62580.000	6188.000	6197.000
X		65.879%	0.144	150.400	159.900	0.000	61470.000	6047.000	6024.000
σ		1.237%	0.041	3.901	4.179	0.000	1015.000	125.700	153.500
%RSD		1.878	28.560	2.594	2.613	0.000	1.652	2.079	2.547
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:34	77.910	3898.000	0.000	10780.000	55220.000	54670.000	56.765%	4.275
2	19:33:01	80.680	4008.000	0.000	11030.000	58420.000	57790.000	57.708%	4.904
3	19:33:27	83.820	4085.000	0.000	11250.000	59810.000	59840.000	56.722%	5.352
X		80.800	3997.000	0.000	11020.000	57820.000	57430.000	57.065%	4.844
σ		2.959	93.810	0.000	236.300	2354.000	2601.000	0.557%	0.541
%RSD		3.662	2.347	0.000	2.145	4.071	4.529	0.976	11.170
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:34	5.143	6.460	27.350	196.000	416.500	0.468	6.992	19.250
2	19:33:01	5.737	6.540	27.990	196.900	415.400	0.474	7.459	19.700
3	19:33:27	5.409	6.787	28.820	207.200	411.800	0.554	7.622	20.050
X		5.430	6.595	28.050	200.000	414.600	0.499	7.358	19.670
σ		0.297	0.171	0.736	6.243	2.450	0.048	0.327	0.398
%RSD		5.478	2.587	2.623	3.122	0.591	9.638	4.444	2.024
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:34	18.800	121.300	125.900	14.000	-1.453	-3.396	0.000	361.500
2	19:33:01	19.400	126.900	127.400	12.940	-0.548	-4.428	0.000	364.700
3	19:33:27	18.960	131.900	132.600	14.450	-0.954	0.447	0.000	374.300
X		19.060	126.700	128.600	13.800	-0.985	-2.459	0.000	366.800
σ		0.311	5.301	3.526	0.774	0.453	2.569	0.000	6.684
%RSD		1.633	4.185	2.741	5.612	46.010	104.500	0.000	1.822
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:34	58.432%	21.800	20.800	58.690%	-0.007	-0.008	1.881	-0.087
2	19:33:01	59.949%	19.440	19.940	59.645%	0.020	-0.006	2.169	-0.029
3	19:33:27	59.030%	18.310	19.000	58.642%	0.023	-0.015	1.957	-0.029
X		59.137%	19.850	19.920	58.992%	0.012	-0.010	2.002	-0.048
σ		0.764%	1.780	0.903	0.566%	0.016	0.005	0.149	0.034
%RSD		1.292	8.969	4.533	0.959	135.100	48.200	7.460	69.680
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:32:34	59.279%	7.439	0.982	0.971	69.060	70.470	64.835%	66.837%
2	19:33:01	58.964%	6.386	1.002	0.935	68.000	70.240	68.682%	66.870%
3	19:33:27	58.380%	6.458	1.002	0.924	70.120	73.310	67.442%	66.739%
X		58.874%	6.761	0.995	0.944	69.060	71.340	66.986%	66.815%
σ		0.456%	0.588	0.012	0.025	1.057	1.712	1.964%	0.068%
%RSD		0.775	8.699	1.161	2.612	1.530	2.400	2.931	0.101
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:32:34	0.118	0.095	0.638	0.473	0.544	71.556%		
2	19:33:01	0.070	0.066	0.643	0.556	0.595	68.627%		
3	19:33:27	0.061	0.046	0.663	0.613	0.614	66.872%		
X		0.083	0.069	0.648	0.547	0.584	69.018%		
σ		0.031	0.024	0.013	0.070	0.036	2.367%		
%RSD		37.180	35.430	1.985	12.880	6.214	3.429		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:36:52	67.884%	0.071	33.340	34.340	0.000	12060.000	1146.000	1146.000	
2	19:37:18	71.527%	0.116	37.310	37.400	0.000	11980.000	1166.000	1162.000	
3	19:37:45	70.627%	0.092	35.270	35.280	0.000	12100.000	1177.000	1168.000	
X		70.013%	0.093	35.310	35.670	0.000	12040.000	1163.000	1159.000	
		σ	1.897%	0.022	1.984	1.567	0.000	61.110	15.610	11.190
		%RSD	2.710	24.080	5.619	4.394	0.000	0.507	1.342	0.966
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:36:52	18.910	737.200	0.000	2136.000	11550.000	10420.000	60.321%	1.065	
2	19:37:18	15.450	723.300	0.000	2097.000	11440.000	10790.000	62.065%	1.770	
3	19:37:45	17.160	724.900	0.000	2121.000	11180.000	10410.000	63.595%	1.829	
X		17.170	728.500	0.000	2118.000	11390.000	10540.000	61.993%	1.555	
		σ	1.730	7.618	0.000	19.560	191.200	219.100	1.638%	0.425
		%RSD	10.070	1.046	0.000	0.924	1.679	2.078	2.643	27.360
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:36:52	0.588	1.065	5.384	30.640	85.950	0.094	1.416	3.989	
2	19:37:18	1.269	1.320	5.605	29.930	77.200	0.106	1.582	4.226	
3	19:37:45	0.772	1.173	5.507	28.760	69.580	0.097	1.354	4.164	
X		0.876	1.186	5.499	29.770	77.580	0.099	1.451	4.126	
		σ	0.353	0.128	0.111	0.946	8.193	0.006	0.118	0.123
		%RSD	40.230	10.780	2.022	3.179	10.560	6.426	8.103	2.977
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:36:52	4.001	23.650	24.660	2.610	-0.956	-2.454	0.000	69.240	
2	19:37:18	3.934	24.790	25.140	2.618	-0.386	-2.172	0.000	71.410	
3	19:37:45	3.976	25.080	25.380	2.118	-0.869	-1.392	0.000	72.850	
X		3.971	24.510	25.060	2.449	-0.737	-2.006	0.000	71.170	
		σ	0.034	0.755	0.367	0.286	0.307	0.550	0.000	1.816
		%RSD	0.857	3.081	1.465	11.690	41.660	27.420	0.000	2.552
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:36:52	61.417%	2.731	2.532	62.151%	-0.022	-0.023	0.487	-1.934	
2	19:37:18	63.505%	2.797	2.901	63.717%	-0.010	-0.030	0.333	-1.939	
3	19:37:45	64.672%	3.181	2.622	66.594%	-0.004	0.007	0.475	-1.955	
X		63.198%	2.903	2.685	64.154%	-0.012	-0.015	0.432	-1.943	
		σ	1.649%	0.243	0.192	2.254%	0.009	0.019	0.085	0.011
		%RSD	2.609	8.376	7.163	3.513	75.940	125.600	19.750	0.576
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	19:36:52	60.612%	1.576	0.175	0.208	14.490	13.990	68.129%	67.084%	
2	19:37:18	65.464%	1.565	0.213	0.222	13.220	13.940	71.075%	70.718%	
3	19:37:45	65.688%	1.490	0.187	0.214	13.560	14.220	71.957%	72.546%	
X		63.921%	1.544	0.192	0.215	13.760	14.050	70.387%	70.116%	
		σ	2.868%	0.047	0.019	0.007	0.655	0.148	2.005%	2.780%
		%RSD	4.487	3.029	10.110	3.267	4.764	1.056	2.848	3.965
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	19:36:52	0.015	0.016	0.149	0.135	0.136	66.237%			
2	19:37:18	0.017	0.013	0.143	0.144	0.137	71.283%			
3	19:37:45	0.012	0.012	0.144	0.100	0.128	71.083%			
X		0.015	0.014	0.145	0.126	0.134	69.534%			
		σ	0.002	0.002	0.003	0.023	0.005	2.858%		
		%RSD	16.610	17.100	2.371	18.560	3.659	4.110		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:23	72.337%	0.042	4.099	3.309	0.000	-76.330	-3.358	-0.883
2	19:44:49	73.399%	0.065	3.124	4.210	0.000	-76.130	-2.468	-1.353
3	19:45:16	74.516%	0.041	4.412	4.140	0.000	-77.270	-2.355	-2.218
X		73.418%	0.050	3.879	3.886	0.000	-76.580	-2.727	-1.484
σ		1.090%	0.014	0.672	0.501	0.000	0.608	0.549	0.677
%RSD		1.484	27.610	17.320	12.900	0.000	0.794	20.140	45.610
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:23	4.759	-4.366	0.000	-56.370	17.420	15.830	63.366%	3.489
2	19:44:49	4.633	-6.658	0.000	-60.330	14.000	9.698	64.217%	1.526
3	19:45:16	4.633	-5.980	0.000	-47.750	36.590	17.570	65.309%	1.696
X		4.675	-5.668	0.000	-54.820	22.670	14.370	64.297%	2.237
σ		0.073	1.177	0.000	6.433	12.180	4.134	0.974%	1.087
%RSD		1.554	20.770	0.000	11.730	53.700	28.780	1.515	48.610
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:23	0.040	-0.032	0.099	-7.681	-0.375	0.009	-0.010	0.481
2	19:44:49	-0.113	-0.031	0.113	-8.043	-2.700	0.012	-0.012	0.325
3	19:45:16	-0.001	0.012	0.069	-8.755	-1.659	0.028	0.167	0.268
X		-0.025	-0.017	0.093	-8.160	-1.578	0.016	0.049	0.358
σ		0.080	0.025	0.022	0.547	1.165	0.010	0.103	0.110
%RSD		321.800	147.000	23.930	6.699	73.810	64.540	211.000	30.760
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:23	0.084	0.669	0.668	-0.252	-1.169	-1.883	0.000	0.039
2	19:44:49	0.223	0.655	0.938	-0.175	0.764	-2.032	0.000	0.039
3	19:45:16	0.029	0.706	0.732	-0.152	-0.796	-1.653	0.000	0.039
X		0.112	0.676	0.779	-0.193	-0.400	-1.856	0.000	0.039
σ		0.100	0.026	0.141	0.053	1.025	0.191	0.000	0.000
%RSD		89.470	3.856	18.140	27.200	256.200	10.290	0.000	0.129
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:23	63.826%	-0.047	-0.140	65.537%	-0.025	-0.020	0.001	-2.300
2	19:44:49	65.491%	0.007	-0.052	67.114%	-0.026	-0.006	-0.007	-2.320
3	19:45:16	66.987%	-0.077	0.016	68.707%	-0.015	-0.005	0.001	-2.373
X		65.434%	-0.039	-0.059	67.120%	-0.022	-0.010	-0.002	-2.331
σ		1.581%	0.043	0.078	1.585%	0.006	0.008	0.005	0.038
%RSD		2.417	110.200	133.200	2.362	29.280	81.630	264.000	1.621
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:44:23	65.081%	0.583	0.010	0.048	0.007	0.035	69.455%	70.842%
2	19:44:49	67.229%	0.704	0.040	0.049	0.022	0.033	73.704%	72.487%
3	19:45:16	66.158%	0.669	0.029	0.029	0.023	0.048	73.186%	72.850%
X		66.156%	0.652	0.026	0.042	0.017	0.038	72.115%	72.060%
σ		1.074%	0.062	0.015	0.011	0.008	0.008	2.319%	1.070%
%RSD		1.623	9.565	57.450	27.320	49.310	20.640	3.215	1.485
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:44:23	0.013	0.010	0.016	0.021	0.018	76.587%		
2	19:44:49	0.006	0.006	0.015	0.002	0.011	76.602%		
3	19:45:16	0.006	0.011	0.041	0.014	0.019	74.095%		
X		0.008	0.009	0.024	0.013	0.016	75.761%		
σ		0.004	0.002	0.015	0.009	0.004	1.443%		
%RSD		48.690	26.980	60.930	75.000	26.940	1.905		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	68.050%	49.850	931.900	967.500	0.000	49170.000	46470.000	46700.000
2	19:49:07	68.232%	52.200	975.600	1002.000	0.000	49920.000	47870.000	47960.000
3	19:49:34	69.437%	52.300	975.600	989.000	0.000	50120.000	48320.000	48250.000
X		68.573%	51.450	961.000	986.200	0.000	49730.000	47550.000	47630.000
σ		0.754%	1.386	25.220	17.380	0.000	500.800	960.200	826.800
%RSD		1.099	2.694	2.624	1.763	0.000	1.007	2.019	1.736
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	1867.000	9703.000	0.000	50530.000	49470.000	46970.000	62.128%	996.500
2	19:49:07	1931.000	9963.000	0.000	50950.000	50620.000	48990.000	63.083%	1015.000
3	19:49:34	1958.000	9961.000	0.000	51090.000	51160.000	50100.000	62.923%	1045.000
X		1919.000	9876.000	0.000	50860.000	50420.000	48690.000	62.712%	1019.000
σ		46.780	149.700	0.000	288.400	865.300	1588.000	0.512%	24.630
%RSD		2.438	1.516	0.000	0.567	1.716	3.262	0.816	2.417
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	489.100	188.000	450.900	987.900	1081.000	492.200	487.100	243.200
2	19:49:07	500.000	195.800	461.000	1014.000	1104.000	503.500	502.100	250.200
3	19:49:34	504.900	201.600	471.600	1038.000	1121.000	508.100	501.800	255.400
X		498.000	195.100	461.200	1013.000	1102.000	501.300	497.000	249.600
σ		8.117	6.839	10.370	25.020	20.330	8.174	8.569	6.157
%RSD		1.630	3.505	2.248	2.469	1.845	1.631	1.724	2.467
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	243.800	488.300	492.000	38.430	9.672	8.754	0.000	1027.000
2	19:49:07	247.600	498.000	498.400	37.830	8.365	5.713	0.000	1048.000
3	19:49:34	251.900	508.700	500.000	38.930	8.233	10.510	0.000	1056.000
X		247.800	498.300	496.800	38.400	8.756	8.324	0.000	1044.000
σ		4.067	10.210	4.210	0.555	0.795	2.425	0.000	15.130
%RSD		1.642	2.048	0.847	1.444	9.082	29.130	0.000	1.450
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	62.283%	983.200	971.900	62.484%	48.500	48.010	51.810	38.060
2	19:49:07	63.561%	1024.000	1017.000	63.014%	49.280	48.550	51.640	37.340
3	19:49:34	64.213%	1046.000	1065.000	62.211%	49.420	49.330	51.350	37.750
X		63.352%	1018.000	1018.000	62.570%	49.070	48.630	51.600	37.720
σ		0.982%	31.890	46.470	0.408%	0.495	0.665	0.231	0.363
%RSD		1.550	3.133	4.565	0.652	1.008	1.368	0.448	0.961
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:48:41	62.317%	2155.000	506.900	507.400	1964.000	2037.000	68.267%	69.844%
2	19:49:07	63.343%	2181.000	521.200	518.600	2015.000	2069.000	70.415%	71.277%
3	19:49:34	63.663%	2207.000	528.600	522.500	2029.000	2070.000	72.839%	71.578%
X		63.108%	2181.000	518.900	516.200	2003.000	2059.000	70.507%	70.900%
σ		0.703%	26.050	11.050	7.810	34.430	18.540	2.287%	0.926%
%RSD		1.114	1.194	2.130	1.513	1.719	0.901	3.244	1.306
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:48:41	49.830	48.490	20.090	19.650	19.750	70.085%		
2	19:49:07	51.130	49.610	20.830	20.510	20.350	70.026%		
3	19:49:34	50.900	49.950	20.670	20.440	20.390	70.242%		
X		50.620	49.350	20.530	20.200	20.160	70.118%		
σ		0.697	0.763	0.389	0.477	0.362	0.111%		
%RSD		1.377	1.545	1.896	2.361	1.796	0.159		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:01	65.254%	52.820	1023.000	1031.000	0.000	49550.000	47060.000	47120.000
2	19:53:27	68.228%	51.780	981.900	1021.000	0.000	49280.000	47220.000	47400.000
3	19:53:54	68.041%	53.700	974.700	1020.000	0.000	49410.000	47680.000	47830.000
X		67.175%	52.770	993.300	1024.000	0.000	49410.000	47320.000	47450.000
σ		1.666%	0.959	26.230	6.234	0.000	133.200	322.800	356.900
%RSD		2.479	1.817	2.641	0.609	0.000	0.270	0.682	0.752
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:01	1950.000	10150.000	0.000	49770.000	48480.000	46980.000	61.206%	1027.000
2	19:53:27	1972.000	10080.000	0.000	50190.000	49920.000	48760.000	62.209%	1059.000
3	19:53:54	2017.000	10280.000	0.000	51150.000	50620.000	48350.000	62.851%	1067.000
X		1980.000	10170.000	0.000	50370.000	49670.000	48030.000	62.089%	1051.000
σ		34.340	99.910	0.000	710.100	1092.000	931.200	0.829%	21.080
%RSD		1.735	0.982	0.000	1.410	2.198	1.939	1.335	2.006
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:01	500.700	196.800	463.600	1023.000	1098.000	507.000	499.900	252.900
2	19:53:27	507.500	201.600	474.100	1040.000	1101.000	516.400	510.800	258.200
3	19:53:54	517.700	202.600	472.400	1057.000	1120.000	521.600	514.700	257.900
X		508.600	200.300	470.000	1040.000	1107.000	515.000	508.500	256.400
σ		8.561	3.072	5.653	17.270	11.990	7.367	7.695	2.981
%RSD		1.683	1.533	1.203	1.661	1.084	1.430	1.513	1.163
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:01	250.200	498.000	491.000	39.980	9.125	11.100	0.000	1040.000
2	19:53:27	254.300	513.700	503.200	39.670	9.726	7.741	0.000	1058.000
3	19:53:54	255.600	517.900	515.900	40.970	11.180	8.854	0.000	1072.000
X		253.300	509.900	503.400	40.200	10.010	9.232	0.000	1057.000
σ		2.825	10.500	12.430	0.678	1.055	1.711	0.000	15.920
%RSD		1.115	2.060	2.470	1.687	10.540	18.540	0.000	1.507
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:01	60.660%	1009.000	1016.000	60.518%	51.140	49.550	54.490	38.120
2	19:53:27	62.761%	1051.000	1064.000	60.578%	51.240	50.770	53.610	38.440
3	19:53:54	62.829%	1087.000	1071.000	62.749%	50.450	50.430	55.200	39.200
X		62.083%	1049.000	1050.000	61.282%	50.940	50.250	54.430	38.590
σ		1.233%	39.280	29.930	1.271%	0.429	0.631	0.793	0.554
%RSD		1.987	3.745	2.850	2.074	0.842	1.255	1.457	1.437
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:53:01	59.913%	2204.000	528.300	527.100	2006.000	2066.000	67.860%	67.841%
2	19:53:27	61.948%	2241.000	536.800	530.600	2029.000	2103.000	69.088%	68.997%
3	19:53:54	61.317%	2298.000	541.100	546.000	2085.000	2173.000	67.836%	69.706%
X		61.059%	2248.000	535.400	534.600	2040.000	2114.000	68.262%	68.848%
σ		1.042%	47.390	6.525	10.070	40.480	54.310	0.716%	0.942%
%RSD		1.706	2.108	1.219	1.884	1.984	2.569	1.049	1.368
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:53:01	49.850	48.510	19.900	19.630	19.730	68.534%		
2	19:53:27	50.680	49.840	20.910	20.570	20.640	69.170%		
3	19:53:54	52.410	49.990	20.410	20.950	20.670	68.579%		
X		50.980	49.450	20.410	20.380	20.350	68.761%		
σ		1.304	0.816	0.504	0.680	0.533	0.355%		
%RSD		2.559	1.649	2.471	3.336	2.621	0.516		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:18	65.527%	98.740	106.800	111.400	0.000	50010.000	48020.000	48070.000
2	19:57:45	66.768%	103.700	113.700	109.900	0.000	50720.000	49420.000	49470.000
3	19:58:12	69.623%	102.600	101.400	105.700	0.000	49890.000	48540.000	48780.000
X		67.306%	101.648%	107.306%	108.974%	0.000	100.415%	97.324%	97.548%
σ		2.100%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.120	2.534	5.711	2.727	0.000	0.892	1.458	1.433
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:18	464.500	5277.000	0.000	50410.000	48170.000	47170.000	61.132%	102.200
2	19:57:45	482.100	5372.000	0.000	50840.000	50000.000	48210.000	62.004%	103.700
3	19:58:12	476.700	5310.000	0.000	50800.000	49770.000	49380.000	62.477%	103.200
X		94.886%	106.390%	0.000	101.364%	98.622%	96.511%	61.871%	103.035%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.682%	n/a
%RSD		1.897	0.901	0.000	0.475	2.020	2.292	1.103	0.728
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:18	95.850	96.630	458.800	25070.000	22920.000	97.990	98.120	98.650
2	19:57:45	96.700	97.810	468.600	25790.000	23810.000	100.700	98.820	102.100
3	19:58:12	97.140	99.340	471.300	25880.000	23770.000	100.300	100.200	101.400
X		96.563%	97.927%	93.247%	102.312%	94.004%	99.670%	99.038%	100.705%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.677	1.387	1.413	1.738	2.130	1.476	1.053	1.797
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:18	97.700	99.240	98.230	100.100	97.030	96.290	0.000	93.460
2	19:57:45	101.100	103.200	101.700	100.300	103.200	99.370	0.000	96.740
3	19:58:12	99.110	102.600	101.000	99.820	92.590	95.990	0.000	94.980
X		99.291%	101.699%	100.330%	100.067%	97.600%	97.217%	0.000	95.058%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.702	2.114	1.839	0.251	5.451	1.923	0.000	1.728
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:18	61.745%	106.100	104.500	61.170%	100.300	99.920	100.700	95.760
2	19:57:45	62.186%	108.700	108.100	62.298%	101.300	101.600	103.900	98.810
3	19:58:12	64.137%	110.400	109.400	62.609%	101.300	101.300	102.400	98.990
X		62.689%	108.395%	107.337%	62.026%	101.002%	100.934%	102.341%	97.853%
σ		1.273%	n/a	n/a	0.757%	n/a	n/a	n/a	n/a
%RSD		2.030	2.034	2.331	1.221	0.579	0.885	1.559	1.855
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:57:18	61.240%	103.400	100.700	101.700	96.110	96.630	67.928%	67.997%
2	19:57:45	62.642%	103.600	103.100	102.400	98.600	99.440	68.576%	69.514%
3	19:58:12	63.147%	105.200	103.100	102.600	97.970	100.900	69.358%	69.870%
X		62.343%	104.076%	102.306%	102.253%	97.560%	98.995%	68.621%	69.127%
σ		0.988%	n/a	n/a	n/a	n/a	n/a	0.716%	0.995%
%RSD		1.585	0.945	1.379	0.479	1.328	2.201	1.043	1.439
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	19:57:18	96.430	94.760	96.610	95.620	95.840	70.041%		
2	19:57:45	99.100	95.980	99.310	98.320	98.650	70.493%		
3	19:58:12	100.300	98.060	101.800	100.300	101.100	70.147%		
X		98.596%	96.266%	99.243%	98.069%	98.530%	70.227%		
σ		n/a	n/a	n/a	n/a	n/a	0.236%		
%RSD		1.986	1.732	2.618	2.382	2.673	0.336		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:45	70.001%	0.093	3.286	4.604	0.000	-56.700	2.821	1.266
2	20:05:11	73.215%	0.042	3.888	3.297	0.000	-58.640	0.335	2.363
3	20:05:38	71.926%	0.115	4.576	4.065	0.000	-55.830	0.931	0.527
X		71.714%	0.083	3.917	3.989	0.000	-57.050	1.362	1.385
σ		1.617%	0.038	0.645	0.657	0.000	1.438	1.298	0.924
%RSD		2.255	45.070	16.480	16.470	0.000	2.521	95.270	66.670
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:45	1.569	-2.549	0.000	-40.680	41.390	27.110	63.318%	1.841
2	20:05:11	1.295	-6.266	0.000	-41.060	7.974	32.830	64.613%	2.793
3	20:05:38	1.490	-5.846	0.000	-40.860	69.620	27.930	64.466%	10.250
X		1.451	-4.887	0.000	-40.870	39.660	29.290	64.132%	4.961
σ		0.141	2.036	0.000	0.189	30.860	3.091	0.709%	4.604
%RSD		9.716	41.650	0.000	0.461	77.810	10.550	1.105	92.800
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:45	0.132	0.045	0.104	-3.195	6.935	0.033	0.016	0.187
2	20:05:11	-0.131	-0.056	0.148	-4.066	5.407	-0.004	-0.088	0.275
3	20:05:38	-0.003	-0.011	0.108	-4.789	5.861	0.031	0.065	0.686
X		-0.001	-0.007	0.120	-4.017	6.068	0.020	-0.002	0.383
σ		0.131	0.050	0.025	0.798	0.785	0.021	0.078	0.266
%RSD		22110.000	691.600	20.480	19.880	12.940	106.400	3416.000	69.510
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:45	0.083	0.417	0.595	-0.243	-1.824	-1.468	0.000	0.051
2	20:05:11	0.190	0.409	0.435	-0.178	-0.471	-1.294	0.000	0.047
3	20:05:38	0.093	0.377	0.354	0.094	-0.233	0.206	0.000	0.043
X		0.122	0.401	0.461	-0.109	-0.843	-0.852	0.000	0.047
σ		0.059	0.021	0.123	0.179	0.858	0.920	0.000	0.004
%RSD		48.660	5.248	26.600	163.800	101.800	108.000	0.000	8.087
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:45	64.617%	0.455	0.434	66.513%	0.001	0.007	0.018	-2.324
2	20:05:11	65.315%	0.525	0.508	68.225%	-0.022	-0.002	0.001	-2.338
3	20:05:38	66.707%	0.637	0.519	68.147%	-0.008	0.008	0.009	-2.346
X		65.546%	0.539	0.487	67.628%	-0.010	0.004	0.009	-2.336
σ		1.064%	0.091	0.046	0.967%	0.012	0.006	0.008	0.011
%RSD		1.624	16.970	9.430	1.429	116.100	136.900	91.880	0.473
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:45	64.379%	1.067	0.480	0.480	0.034	0.045	69.876%	71.054%
2	20:05:11	66.384%	1.053	0.419	0.548	0.031	0.081	72.221%	72.418%
3	20:05:38	65.773%	1.197	0.454	0.421	0.006	0.072	72.894%	73.393%
X		65.512%	1.106	0.451	0.483	0.024	0.066	71.664%	72.288%
σ		1.028%	0.079	0.031	0.063	0.015	0.019	1.584%	1.175%
%RSD		1.569	7.154	6.782	13.110	64.620	28.310	2.211	1.625
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:04:45	0.014	0.011	0.028	0.008	0.017	73.948%		
2	20:05:11	0.016	0.012	0.025	0.015	0.019	75.881%		
3	20:05:38	0.009	0.009	0.023	0.006	0.011	75.185%		
X		0.013	0.011	0.025	0.010	0.016	75.005%		
σ		0.004	0.001	0.003	0.005	0.004	0.979%		
%RSD		26.750	12.420	10.120	50.010	26.510	1.306		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	65.313%	0.180	554.900	591.500	0.000	428500.000	23620.000	23880.000
2	20:09:29	65.110%	0.047	588.400	606.800	0.000	430400.000	24050.000	24220.000
3	20:09:55	66.734%	0.176	578.300	591.100	0.000	422800.000	23770.000	23970.000
X		65.719%	0.134	573.900	596.500	0.000	427200.000	23810.000	24030.000
σ		0.885%	0.075	17.200	8.962	0.000	3953.000	217.400	173.900
%RSD		1.347	56.060	2.998	1.503	0.000	0.925	0.913	0.724
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	2.462	11390.000	0.000	10700.000	45090.000	43320.000	59.245%	1.499
2	20:09:29	2.532	11420.000	0.000	10640.000	44580.000	43580.000	60.496%	1.189
3	20:09:55	2.425	11310.000	0.000	10680.000	45900.000	44020.000	60.548%	1.155
X		2.473	11370.000	0.000	10670.000	45190.000	43640.000	60.097%	1.281
σ		0.054	58.270	0.000	33.000	663.600	355.800	0.738%	0.189
%RSD		2.193	0.512	0.000	0.309	1.469	0.815	1.227	14.790
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	1.290	0.686	256.400	1668.000	1581.000	0.885	6.830	2.908
2	20:09:29	1.258	0.643	261.000	1697.000	1600.000	0.863	7.382	2.750
3	20:09:55	1.024	0.697	260.600	1714.000	1628.000	0.966	7.430	2.890
X		1.191	0.675	259.400	1693.000	1603.000	0.905	7.214	2.849
σ		0.145	0.029	2.569	23.130	23.270	0.054	0.333	0.086
%RSD		12.180	4.239	0.990	1.367	1.452	5.997	4.622	3.032
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	2.359	10.660	10.020	5.326	61.220	60.540	0.000	440.200
2	20:09:29	2.389	10.780	9.586	4.895	59.340	66.460	0.000	451.500
3	20:09:55	2.490	10.860	11.590	4.785	64.060	67.590	0.000	453.000
X		2.413	10.770	10.400	5.002	61.540	64.860	0.000	448.200
σ		0.069	0.100	1.053	0.286	2.378	3.788	0.000	6.993
%RSD		2.842	0.927	10.130	5.717	3.864	5.839	0.000	1.560
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	60.765%	27.870	28.070	59.600%	-0.012	-0.013	0.038	-2.256
2	20:09:29	61.738%	30.680	29.480	60.310%	0.014	0.009	0.002	-2.296
3	20:09:55	61.259%	31.740	31.400	59.488%	-0.005	0.000	0.046	-2.292
X		61.254%	30.100	29.650	59.799%	-0.001	-0.001	0.029	-2.281
σ		0.486%	1.998	1.671	0.445%	0.013	0.011	0.024	0.022
%RSD		0.794	6.639	5.637	0.745	1439.000	925.700	82.860	0.977
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:09:02	59.307%	0.493	4.256	4.139	99.400	99.530	68.305%	67.905%
2	20:09:29	60.994%	0.701	4.472	4.282	99.150	99.540	68.658%	69.421%
3	20:09:55	60.876%	0.647	4.361	4.560	99.640	101.100	69.237%	69.192%
X		60.392%	0.614	4.363	4.327	99.400	100.000	68.733%	68.839%
σ		0.941%	0.108	0.108	0.214	0.244	0.886	0.470%	0.817%
%RSD		1.559	17.550	2.475	4.953	0.246	0.886	0.684	1.186
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:09:02	0.010	0.004	0.062	0.051	0.058	65.557%		
2	20:09:29	0.015	0.010	0.068	0.070	0.065	66.753%		
3	20:09:55	0.017	0.015	0.062	0.058	0.061	67.131%		
X		0.014	0.010	0.064	0.060	0.061	66.480%		
σ		0.004	0.006	0.003	0.010	0.004	0.822%		
%RSD		27.730	59.170	4.707	16.920	6.064	1.236		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:17	64.962%	0.154	225.400	230.100	0.000	91400.000	16680.000	16630.000
2	20:13:43	64.848%	0.127	217.800	228.800	0.000	91750.000	17010.000	17100.000
3	20:14:10	68.647%	0.095	220.400	221.000	0.000	90140.000	16770.000	16880.000
X		66.152%	0.125	221.200	226.600	0.000	91100.000	16820.000	16870.000
σ		2.161%	0.029	3.839	4.904	0.000	847.100	168.700	234.400
%RSD		3.266	23.320	1.736	2.164	0.000	0.930	1.003	1.390
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:17	5.478	7479.000	0.000	4101.000	27270.000	25950.000	60.322%	1.228
2	20:13:43	6.109	7623.000	0.000	4239.000	28200.000	26640.000	61.813%	0.730
3	20:14:10	6.583	7500.000	0.000	4220.000	28890.000	27170.000	60.732%	0.888
X		6.057	7534.000	0.000	4187.000	28120.000	26590.000	60.956%	0.948
σ		0.554	77.640	0.000	74.950	812.000	613.400	0.770%	0.255
%RSD		9.153	1.030	0.000	1.790	2.887	2.307	1.264	26.870
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:17	2.644	0.127	0.421	-5.943	113.000	0.058	1.013	3.606
2	20:13:43	2.789	0.187	0.441	-5.971	110.800	0.062	0.767	3.893
3	20:14:10	2.796	0.131	0.337	-6.307	113.500	0.065	0.878	3.861
X		2.743	0.149	0.400	-6.074	112.500	0.062	0.886	3.787
σ		0.086	0.034	0.055	0.203	1.470	0.003	0.123	0.158
%RSD		3.125	22.560	13.740	3.341	1.307	5.510	13.920	4.160
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:17	3.771	5.131	5.919	1.650	0.397	0.928	0.000	290.300
2	20:13:43	3.386	5.099	5.140	1.402	-1.084	-0.046	0.000	292.700
3	20:14:10	3.988	5.454	5.304	1.546	0.197	0.214	0.000	292.300
X		3.715	5.228	5.454	1.532	-0.163	0.365	0.000	291.700
σ		0.305	0.197	0.410	0.125	0.803	0.504	0.000	1.284
%RSD		8.217	3.759	7.525	8.134	492.000	138.000	0.000	0.440
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:17	61.178%	2.016	1.762	61.101%	-0.022	-0.029	0.002	-2.276
2	20:13:43	63.062%	1.971	1.953	62.491%	-0.016	-0.030	0.010	-2.301
3	20:14:10	63.037%	1.974	1.853	62.360%	-0.003	-0.023	0.001	-2.323
X		62.426%	1.987	1.856	61.984%	-0.013	-0.027	0.004	-2.300
σ		1.080%	0.025	0.096	0.768%	0.010	0.004	0.005	0.023
%RSD		1.731	1.267	5.153	1.239	72.610	13.730	113.700	1.013
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:13:17	61.727%	0.383	0.228	0.232	47.700	48.730	67.489%	69.319%
2	20:13:43	62.081%	0.394	0.300	0.268	48.080	49.730	71.023%	71.426%
3	20:14:10	61.923%	0.422	0.279	0.250	47.920	49.670	71.099%	70.057%
X		61.910%	0.400	0.269	0.250	47.900	49.380	69.870%	70.268%
σ		0.177%	0.020	0.037	0.018	0.190	0.558	2.062%	1.069%
%RSD		0.286	5.052	13.720	7.070	0.396	1.130	2.952	1.521
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:13:17	0.005	0.005	0.037	0.038	0.032	68.197%		
2	20:13:43	0.014	0.005	0.051	0.025	0.031	68.469%		
3	20:14:10	0.008	0.004	0.041	0.035	0.038	68.939%		
X		0.009	0.005	0.043	0.033	0.034	68.535%		
σ		0.005	0.001	0.007	0.007	0.004	0.375%		
%RSD		50.080	13.000	16.650	19.980	10.790	0.548		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:32	66.562%	0.072	44.280	46.370	0.000	17950.000	3156.000	3094.000
2	20:17:59	68.017%	0.045	45.390	49.570	0.000	18100.000	3173.000	3170.000
3	20:18:25	70.370%	0.068	39.590	47.070	0.000	17690.000	3149.000	3112.000
X		68.316%	0.062	43.090	47.670	0.000	17910.000	3160.000	3125.000
		1.921%	0.015	3.080	1.682	0.000	205.500	12.150	39.600
		2.813	23.620	7.148	3.528	0.000	1.147	0.385	1.267
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:32	1.847	1432.000	0.000	738.700	5556.000	5076.000	60.000%	0.221
2	20:17:59	1.721	1431.000	0.000	742.800	5509.000	5048.000	61.873%	0.537
3	20:18:25	1.554	1407.000	0.000	743.600	5642.000	5130.000	62.105%	0.499
X		1.707	1423.000	0.000	741.700	5569.000	5085.000	61.326%	0.419
		0.147	14.210	0.000	2.623	67.510	41.280	1.155%	0.173
		8.607	0.998	0.000	0.354	1.212	0.812	1.883	41.260
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:32	0.411	-0.051	0.112	-9.009	24.110	-0.001	0.127	0.700
2	20:17:59	0.568	0.006	0.112	-9.908	21.070	0.010	0.051	0.809
3	20:18:25	0.529	-0.000	0.124	-10.980	17.100	0.016	0.128	0.940
X		0.503	-0.015	0.116	-9.964	20.760	0.008	0.102	0.816
		0.082	0.032	0.007	0.984	3.517	0.009	0.044	0.120
		16.290	207.100	5.849	9.879	16.940	104.400	43.070	14.730
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:32	0.843	1.266	1.147	0.185	-1.066	-1.113	0.000	54.970
2	20:17:59	0.817	1.380	1.783	0.144	0.019	-1.483	0.000	57.820
3	20:18:25	0.797	1.149	0.970	-0.154	-1.850	-3.107	0.000	56.670
X		0.819	1.265	1.300	0.058	-0.966	-1.901	0.000	56.490
		0.023	0.116	0.428	0.185	0.939	1.060	0.000	1.436
		2.806	9.159	32.890	318.100	97.220	55.780	0.000	2.541
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:32	62.492%	0.116	0.122	62.457%	-0.026	-0.027	-0.007	-2.279
2	20:17:59	62.647%	0.251	0.177	64.559%	-0.019	-0.024	-0.007	-2.280
3	20:18:25	64.162%	0.096	0.231	65.214%	-0.021	-0.005	-0.007	-2.329
X		63.100%	0.155	0.177	64.077%	-0.022	-0.019	-0.007	-2.296
		0.923%	0.084	0.055	1.440%	0.004	0.012	0.000	0.029
		1.462	54.300	30.950	2.248	17.110	62.370	0.000	1.244
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:17:32	62.028%	0.410	0.122	0.163	9.066	9.257	69.710%	68.765%
2	20:17:59	63.953%	0.571	0.164	0.134	9.224	9.990	69.381%	71.141%
3	20:18:25	65.868%	0.566	0.124	0.175	9.886	9.618	70.489%	72.141%
X		63.950%	0.516	0.137	0.157	9.392	9.622	69.860%	70.682%
		1.920%	0.091	0.023	0.021	0.435	0.366	0.569%	1.734%
		3.002	17.730	16.970	13.490	4.634	3.808	0.814	2.453
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:17:32	0.002	0.001	0.013	-0.002	0.001	74.433%		
2	20:17:59	0.002	0.005	0.002	-0.008	0.001	74.587%		
3	20:18:25	0.006	0.002	0.014	-0.008	-0.001	76.002%		
X		0.004	0.003	0.009	-0.006	0.001	75.007%		
		0.002	0.002	0.006	0.004	0.001	0.865%		
		55.230	82.470	66.130	61.640	234.900	1.154		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:49	68.388%	0.096	157.900	163.900	0.000	49710.000	30740.000	30930.000
2	20:22:15	68.114%	0.045	176.800	169.200	0.000	50120.000	31310.000	31420.000
3	20:22:42	67.963%	0.071	176.000	175.800	0.000	51170.000	31900.000	32020.000
X		68.155%	0.070	170.200	169.600	0.000	50330.000	31310.000	31460.000
σ		0.215%	0.025	10.660	5.977	0.000	754.100	581.500	547.600
%RSD		0.316	35.910	6.264	3.524	0.000	1.498	1.857	1.741
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:49	102.500	2760.000	0.000	3637.000	39150.000	36460.000	61.368%	10.170
2	20:22:15	94.850	2920.000	0.000	3650.000	38710.000	37360.000	63.352%	13.800
3	20:22:42	103.100	2924.000	0.000	3682.000	39320.000	38100.000	63.158%	5.305
X		100.200	2868.000	0.000	3656.000	39060.000	37310.000	62.626%	9.760
σ		4.606	93.300	0.000	22.850	312.300	820.800	1.094%	4.263
%RSD		4.599	3.253	0.000	0.625	0.799	2.200	1.747	43.680
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:49	3.033	-1.602	24.670	64.100	212.500	0.180	0.687	2.312
2	20:22:15	3.052	-1.544	25.240	60.110	209.000	0.173	0.679	2.086
3	20:22:42	2.946	-1.427	25.720	66.010	215.700	0.280	0.647	2.128
X		3.010	-1.524	25.210	63.410	212.400	0.211	0.671	2.175
σ		0.057	0.089	0.523	3.010	3.347	0.060	0.021	0.120
%RSD		1.880	5.824	2.073	4.747	1.576	28.270	3.106	5.517
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:49	1.848	43.390	44.850	8.022	-0.361	0.358	0.000	718.400
2	20:22:15	1.900	45.780	46.620	8.187	-2.088	-1.183	0.000	736.500
3	20:22:42	2.000	46.400	46.370	8.280	-1.687	-0.706	0.000	744.600
X		1.916	45.190	45.950	8.163	-1.378	-0.511	0.000	733.200
σ		0.077	1.586	0.958	0.131	0.904	0.789	0.000	13.400
%RSD		4.021	3.511	2.085	1.602	65.580	154.500	0.000	1.828
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:49	63.046%	1.838	1.863	62.428%	-0.001	-0.008	0.001	-2.320
2	20:22:15	65.562%	2.586	1.895	65.075%	-0.003	-0.010	0.026	-2.295
3	20:22:42	65.580%	2.190	2.179	64.789%	-0.021	0.009	0.009	-2.305
X		64.729%	2.205	1.979	64.097%	-0.008	-0.003	0.012	-2.307
σ		1.458%	0.375	0.174	1.453%	0.011	0.010	0.012	0.013
%RSD		2.252	16.990	8.783	2.267	133.200	371.600	103.100	0.549
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:49	63.493%	0.207	0.196	0.240	49.540	50.300	69.919%	71.030%
2	20:22:15	65.622%	0.242	0.183	0.190	50.260	50.700	72.248%	72.819%
3	20:22:42	65.997%	0.154	0.222	0.207	49.600	49.600	74.378%	73.084%
X		65.037%	0.201	0.200	0.213	49.800	50.200	72.182%	72.311%
σ		1.351%	0.044	0.020	0.026	0.403	0.557	2.230%	1.117%
%RSD		2.077	21.920	9.749	12.000	0.809	1.110	3.089	1.545
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:21:49	0.005	0.002	0.413	0.339	0.377	68.934%		
2	20:22:15	0.003	0.004	0.420	0.368	0.379	71.665%		
3	20:22:42	0.007	0.003	0.395	0.332	0.371	72.479%		
X		0.005	0.003	0.409	0.346	0.375	71.026%		
σ		0.002	0.001	0.013	0.019	0.004	1.857%		
%RSD		47.550	31.270	3.251	5.606	1.057	2.614		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:05	68.114%	0.121	163.800	165.300	0.000	50220.000	31070.000	31210.000
2	20:26:31	69.130%	0.044	165.100	170.200	0.000	50720.000	31690.000	31900.000
3	20:26:58	69.807%	0.069	179.400	169.300	0.000	50470.000	31600.000	32020.000
X		69.017%	0.078	169.400	168.300	0.000	50470.000	31450.000	31710.000
σ		0.852%	0.039	8.661	2.598	0.000	249.100	333.400	438.900
%RSD		1.234	50.280	5.112	1.544	0.000	0.494	1.060	1.384
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:05	115.000	2915.000	0.000	3638.000	38700.000	37050.000	62.629%	2.658
2	20:26:31	103.000	2920.000	0.000	3656.000	39650.000	37930.000	63.043%	2.728
3	20:26:58	130.500	2919.000	0.000	3699.000	40400.000	38340.000	63.928%	4.059
X		116.200	2918.000	0.000	3665.000	39580.000	37770.000	63.200%	3.148
σ		13.800	2.525	0.000	31.250	853.000	659.900	0.663%	0.790
%RSD		11.880	0.087	0.000	0.853	2.155	1.747	1.049	25.080
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:05	2.815	-1.471	26.490	76.710	229.200	0.272	0.877	2.121
2	20:26:31	2.964	-1.424	27.210	78.160	244.100	0.272	0.683	2.086
3	20:26:58	2.877	-1.382	27.300	87.780	228.700	0.277	0.860	2.120
X		2.885	-1.425	27.000	80.880	234.000	0.274	0.807	2.109
σ		0.075	0.045	0.442	6.017	8.762	0.003	0.107	0.020
%RSD		2.593	3.128	1.635	7.439	3.744	1.086	13.310	0.942
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:05	2.075	43.570	42.710	7.721	-2.020	-1.840	0.000	730.800
2	20:26:31	2.096	44.480	46.390	8.182	-1.709	-0.358	0.000	738.400
3	20:26:58	1.963	45.530	44.710	8.339	-1.202	0.251	0.000	734.900
X		2.044	44.530	44.600	8.081	-1.643	-0.649	0.000	734.700
σ		0.071	0.983	1.840	0.321	0.413	1.075	0.000	3.780
%RSD		3.492	2.207	4.125	3.976	25.130	165.700	0.000	0.515
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:05	63.941%	2.047	1.751	63.390%	-0.031	-0.015	0.001	-2.265
2	20:26:31	64.146%	2.077	2.028	63.637%	-0.025	-0.013	-0.007	-2.285
3	20:26:58	66.597%	2.327	2.165	65.702%	-0.016	-0.002	0.009	-2.331
X		64.895%	2.150	1.981	64.243%	-0.024	-0.010	0.001	-2.294
σ		1.478%	0.154	0.211	1.269%	0.008	0.007	0.008	0.034
%RSD		2.277	7.144	10.640	1.976	32.770	73.370	805.500	1.494
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:26:05	64.662%	0.126	0.205	0.193	49.020	50.930	71.654%	71.266%
2	20:26:31	65.008%	0.219	0.218	0.179	50.510	50.440	71.782%	72.386%
3	20:26:58	66.314%	0.209	0.209	0.189	51.070	50.410	74.775%	74.779%
X		65.328%	0.185	0.211	0.187	50.200	50.590	72.737%	72.810%
σ		0.871%	0.051	0.006	0.007	1.056	0.292	1.766%	1.795%
%RSD		1.334	27.870	3.053	3.916	2.103	0.577	2.428	2.465
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:26:05	0.001	0.001	0.401	0.376	0.391	70.863%		
2	20:26:31	0.004	0.003	0.438	0.356	0.417	71.475%		
3	20:26:58	0.006	0.005	0.429	0.366	0.398	73.926%		
X		0.004	0.003	0.423	0.366	0.402	72.088%		
σ		0.002	0.002	0.020	0.010	0.013	1.621%		
%RSD		61.890	70.590	4.633	2.727	3.243	2.249		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:22	69.896%	0.093	59.500	58.870	0.000	24040.000	5234.000	5195.000
2	20:30:49	70.402%	0.117	60.630	62.360	0.000	24340.000	5371.000	5363.000
3	20:31:15	72.604%	0.066	60.400	60.130	0.000	24000.000	5336.000	5264.000
X		70.968%	0.092	60.180	60.450	0.000	24130.000	5314.000	5274.000
σ		1.440%	0.026	0.597	1.766	0.000	184.100	71.200	84.150
%RSD		2.029	27.840	0.992	2.922	0.000	0.763	1.340	1.596
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:22	2.390	3500.000	0.000	5380.000	33030.000	31680.000	62.346%	0.716
2	20:30:49	2.106	3592.000	0.000	5469.000	34580.000	32720.000	62.942%	0.887
3	20:31:15	2.251	3532.000	0.000	5463.000	33700.000	32990.000	63.993%	0.672
X		2.249	3541.000	0.000	5437.000	33770.000	32470.000	63.094%	0.758
σ		0.142	46.610	0.000	49.640	780.300	692.800	0.834%	0.113
%RSD		6.308	1.316	0.000	0.913	2.311	2.134	1.322	14.930
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:22	1.427	-0.534	5.744	-9.362	137.200	0.163	0.262	1.874
2	20:30:49	1.436	-0.558	5.865	-10.390	124.900	0.114	0.432	1.900
3	20:31:15	1.376	-0.728	5.703	-10.970	124.400	0.181	0.158	1.883
X		1.413	-0.607	5.771	-10.240	128.800	0.153	0.284	1.886
σ		0.033	0.106	0.084	0.814	7.266	0.035	0.138	0.013
%RSD		2.320	17.440	1.456	7.945	5.640	22.780	48.560	0.715
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:22	1.920	5.431	5.618	0.853	-0.474	-2.888	0.000	164.900
2	20:30:49	1.891	6.181	5.969	1.067	-0.877	-2.233	0.000	164.800
3	20:31:15	2.003	6.083	4.775	1.394	-0.631	-1.036	0.000	166.100
X		1.938	5.898	5.454	1.105	-0.661	-2.052	0.000	165.300
σ		0.058	0.408	0.613	0.273	0.203	0.939	0.000	0.725
%RSD		2.989	6.910	11.240	24.670	30.730	45.750	0.000	0.439
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:22	63.169%	0.464	0.430	63.849%	-0.023	-0.015	-0.007	-2.352
2	20:30:49	64.970%	0.432	0.480	64.797%	-0.025	0.003	0.009	-2.319
3	20:31:15	65.945%	0.967	0.584	66.434%	-0.034	-0.025	-0.007	-2.212
X		64.695%	0.621	0.498	65.027%	-0.027	-0.012	-0.002	-2.295
σ		1.408%	0.300	0.078	1.308%	0.006	0.014	0.010	0.073
%RSD		2.177	48.330	15.750	2.011	21.190	114.400	549.500	3.197
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:30:22	64.990%	0.122	0.173	0.174	75.000	78.000	69.443%	71.024%
2	20:30:49	65.789%	0.136	0.185	0.227	76.490	76.880	72.040%	72.324%
3	20:31:15	67.064%	0.134	0.198	0.211	77.160	77.890	74.053%	74.165%
X		65.948%	0.130	0.185	0.204	76.220	77.590	71.845%	72.504%
σ		1.046%	0.007	0.013	0.027	1.108	0.617	2.311%	1.578%
%RSD		1.586	5.666	6.955	13.380	1.453	0.795	3.217	2.177
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:30:22	0.004	0.001	0.016	-0.002	0.009	73.505%		
2	20:30:49	0.002	0.002	0.005	0.001	0.005	74.541%		
3	20:31:15	0.003	0.004	0.012	0.006	0.011	76.006%		
X		0.003	0.002	0.011	0.002	0.008	74.684%		
σ		0.001	0.001	0.005	0.004	0.003	1.256%		
%RSD		21.510	61.690	49.050	201.500	37.100	1.682		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:40	70.162%	0.068	14.510	16.210	0.000	4818.000	1039.000	1027.000
2	20:35:06	73.190%	0.066	13.320	13.470	0.000	4768.000	1038.000	1026.000
3	20:35:33	71.878%	0.067	14.610	14.190	0.000	4827.000	1047.000	1036.000
X		71.743%	0.067	14.140	14.630	0.000	4804.000	1041.000	1030.000
σ		1.518%	0.001	0.716	1.417	0.000	31.910	4.816	5.320
%RSD		2.117	2.199	5.065	9.685	0.000	0.664	0.462	0.517
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:40	0.513	665.000	0.000	1014.000	6693.000	6168.000	62.712%	0.737
2	20:35:06	0.243	662.700	0.000	1022.000	6765.000	6366.000	63.848%	0.677
3	20:35:33	0.290	664.500	0.000	1007.000	6643.000	6281.000	64.504%	0.813
X		0.349	664.100	0.000	1014.000	6700.000	6272.000	63.688%	0.743
σ		0.144	1.188	0.000	7.623	61.290	99.020	0.907%	0.068
%RSD		41.370	0.179	0.000	0.752	0.915	1.579	1.423	9.200
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:40	0.189	-0.174	1.221	-10.700	19.380	0.009	0.015	2.111
2	20:35:06	0.249	-0.120	1.159	-11.660	20.650	0.016	0.271	2.174
3	20:35:33	0.253	-0.178	1.199	-12.500	22.990	0.005	0.004	2.105
X		0.230	-0.157	1.193	-11.620	21.010	0.010	0.097	2.130
σ		0.036	0.032	0.032	0.901	1.834	0.005	0.151	0.038
%RSD		15.680	20.430	2.650	7.754	8.730	52.980	156.600	1.798
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:40	1.780	2.233	2.475	-0.136	-1.906	-1.702	0.000	32.280
2	20:35:06	1.947	2.080	2.007	-0.277	-0.405	-2.873	0.000	33.180
3	20:35:33	1.846	2.292	2.088	0.057	0.668	-1.201	0.000	33.130
X		1.858	2.202	2.190	-0.119	-0.547	-1.925	0.000	32.870
σ		0.084	0.109	0.250	0.167	1.293	0.858	0.000	0.504
%RSD		4.537	4.969	11.430	141.000	236.100	44.580	0.000	1.534
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:40	63.929%	-0.302	-0.360	65.236%	-0.017	-0.015	-0.007	-2.242
2	20:35:06	65.002%	-0.252	-0.328	66.753%	-0.006	-0.002	0.009	-2.339
3	20:35:33	65.702%	-0.269	-0.265	67.292%	-0.016	-0.010	0.049	-2.302
X		64.878%	-0.274	-0.318	66.427%	-0.013	-0.009	0.017	-2.295
σ		0.893%	0.026	0.048	1.066%	0.006	0.007	0.029	0.049
%RSD		1.376	9.375	15.110	1.605	47.110	73.230	171.100	2.126
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:34:40	64.223%	0.215	0.066	0.070	16.100	16.000	71.132%	71.423%
2	20:35:06	66.518%	0.277	0.091	0.069	15.320	15.370	71.978%	71.902%
3	20:35:33	66.653%	0.265	0.064	0.067	15.600	15.840	72.882%	73.170%
X		65.798%	0.252	0.073	0.069	15.670	15.740	71.997%	72.165%
σ		1.366%	0.033	0.015	0.002	0.394	0.328	0.875%	0.903%
%RSD		2.076	13.060	20.610	2.678	2.516	2.085	1.216	1.251
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:34:40	0.001	0.002	0.115	0.088	0.094	76.993%		
2	20:35:06	0.003	0.001	0.111	0.094	0.105	78.192%		
3	20:35:33	-0.000	-0.002	0.102	0.084	0.094	77.012%		
X		0.001	0.000	0.109	0.089	0.098	77.399%		
σ		0.002	0.002	0.007	0.005	0.006	0.687%		
%RSD		117.000	504.400	6.232	6.061	6.131	0.887		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:11	69.659%	0.094	2.663	1.850	0.000	5.743	-3.522	-0.828
2	20:42:37	71.713%	0.043	2.732	2.239	0.000	7.616	-2.145	-1.254
3	20:43:04	73.144%	0.018	2.980	1.496	0.000	8.030	-2.967	-1.972
X		71.505%	0.051	2.792	1.862	0.000	7.130	-2.878	-1.351
σ		1.752%	0.039	0.167	0.372	0.000	1.218	0.693	0.578
%RSD		2.449	74.900	5.969	19.960	0.000	17.090	24.090	42.780
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:11	2.408	-3.507	0.000	-40.770	11.220	23.360	64.037%	0.644
2	20:42:37	2.406	-7.491	0.000	-41.920	16.610	19.730	64.931%	1.136
3	20:43:04	2.256	-6.071	0.000	-42.300	7.902	20.750	64.802%	1.382
X		2.356	-5.690	0.000	-41.660	11.910	21.280	64.590%	1.054
σ		0.087	2.019	0.000	0.798	4.396	1.874	0.483%	0.376
%RSD		3.683	35.480	0.000	1.914	36.910	8.806	0.748	35.690
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:11	-0.071	-0.036	0.059	-9.950	2.223	-0.006	-0.163	0.077
2	20:42:37	-0.048	-0.008	0.086	-11.520	-1.855	-0.011	-0.238	0.224
3	20:43:04	-0.008	-0.057	0.077	-12.140	-4.860	-0.019	-0.092	0.309
X		-0.042	-0.034	0.074	-11.200	-1.497	-0.012	-0.164	0.203
σ		0.031	0.025	0.013	1.131	3.555	0.006	0.073	0.117
%RSD		74.400	73.740	18.220	10.090	237.400	55.780	44.590	57.700
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:11	0.116	3.289	2.882	-0.473	-1.200	-2.056	0.000	0.072
2	20:42:37	0.125	3.455	3.328	-0.790	-0.996	-5.336	0.000	0.050
3	20:43:04	0.180	3.428	3.372	-0.756	-0.933	-5.116	0.000	0.062
X		0.140	3.391	3.194	-0.673	-1.043	-4.169	0.000	0.061
σ		0.035	0.089	0.271	0.174	0.140	1.833	0.000	0.011
%RSD		24.710	2.628	8.492	25.850	13.410	43.970	0.000	18.480
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:11	63.366%	-0.519	-0.598	66.308%	-0.028	-0.014	0.001	-2.255
2	20:42:37	65.883%	-0.518	-0.607	68.081%	-0.024	-0.029	0.001	-2.341
3	20:43:04	66.377%	-0.557	-0.580	68.357%	-0.025	-0.021	-0.007	-2.288
X		65.209%	-0.531	-0.595	67.582%	-0.025	-0.021	-0.002	-2.295
σ		1.615%	0.022	0.013	1.112%	0.002	0.008	0.005	0.043
%RSD		2.476	4.177	2.257	1.646	7.306	35.570	267.300	1.888
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:42:11	64.516%	0.196	0.034	0.035	0.025	0.011	70.303%	70.690%
2	20:42:37	66.049%	0.223	0.017	0.020	0.048	0.038	72.550%	72.454%
3	20:43:04	67.385%	0.194	0.035	0.055	0.005	0.047	72.929%	73.751%
X		65.983%	0.204	0.029	0.037	0.026	0.032	71.927%	72.298%
σ		1.435%	0.016	0.010	0.018	0.021	0.019	1.420%	1.536%
%RSD		2.175	7.830	34.050	48.130	82.160	59.360	1.974	2.125
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:42:11	-0.000	-0.001	0.005	0.016	0.008	76.406%		
2	20:42:37	0.001	0.000	0.008	-0.002	0.003	76.697%		
3	20:43:04	-0.001	-0.002	0.010	0.007	0.011	78.028%		
X		-0.000	-0.001	0.007	0.007	0.007	77.044%		
σ		0.001	0.001	0.003	0.009	0.004	0.865%		
%RSD		3339.000	111.700	35.000	134.800	50.840	1.123		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:28	62.096%	49.840	919.700	960.500	0.000	48870.000	46270.000	46540.000
2	20:46:55	63.255%	49.700	926.200	951.200	0.000	48210.000	46120.000	46270.000
3	20:47:21	62.253%	54.140	965.900	976.700	0.000	48870.000	46630.000	46780.000
X		62.535%	51.230	937.300	962.800	0.000	48650.000	46340.000	46530.000
σ		0.629%	2.521	24.990	12.890	0.000	383.100	264.000	256.800
%RSD		1.005	4.922	2.666	1.339	0.000	0.787	0.570	0.552
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:28	1847.000	9704.000	0.000	50130.000	49400.000	47250.000	56.650%	1003.000
2	20:46:55	1861.000	9633.000	0.000	49570.000	49470.000	47580.000	57.316%	1020.000
3	20:47:21	1882.000	9687.000	0.000	50010.000	50070.000	47920.000	58.235%	1017.000
X		1863.000	9675.000	0.000	49910.000	49640.000	47580.000	57.400%	1013.000
σ		17.830	37.030	0.000	295.300	368.100	333.900	0.796%	9.065
%RSD		0.957	0.383	0.000	0.592	0.741	0.702	1.387	0.895
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:28	479.400	189.300	443.100	972.700	1055.000	484.600	479.200	245.300
2	20:46:55	487.400	192.600	449.800	985.500	1066.000	491.100	486.500	246.700
3	20:47:21	486.900	192.300	455.100	998.000	1072.000	497.100	491.100	248.500
X		484.500	191.400	449.300	985.400	1064.000	490.900	485.600	246.800
σ		4.452	1.843	5.999	12.660	8.404	6.253	5.972	1.590
%RSD		0.919	0.963	1.335	1.285	0.790	1.274	1.230	0.644
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:28	240.200	480.300	476.800	37.080	7.238	9.397	0.000	986.800
2	20:46:55	245.000	494.200	490.700	38.130	9.162	6.615	0.000	1011.000
3	20:47:21	244.700	490.900	486.300	38.660	10.360	7.309	0.000	1012.000
X		243.300	488.500	484.600	37.960	8.922	7.774	0.000	1003.000
σ		2.697	7.230	7.082	0.801	1.577	1.448	0.000	14.350
%RSD		1.108	1.480	1.461	2.109	17.670	18.630	0.000	1.430
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:28	58.674%	920.800	927.900	58.486%	50.260	49.150	50.960	35.930
2	20:46:55	59.077%	981.400	987.600	58.978%	50.540	50.600	51.250	37.900
3	20:47:21	59.424%	1016.000	1016.000	59.364%	49.960	49.390	52.200	35.180
X		59.058%	972.700	977.200	58.943%	50.250	49.710	51.470	36.340
σ		0.376%	48.190	44.930	0.440%	0.290	0.776	0.649	1.405
%RSD		0.636	4.954	4.598	0.746	0.577	1.561	1.261	3.867
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:46:28	58.160%	2133.000	519.100	513.900	1925.000	1974.000	66.034%	65.972%
2	20:46:55	58.091%	2182.000	525.400	526.200	1981.000	2052.000	66.700%	67.214%
3	20:47:21	60.371%	2147.000	516.600	516.300	1945.000	2033.000	67.476%	68.196%
X		58.874%	2154.000	520.400	518.800	1950.000	2020.000	66.737%	67.127%
σ		1.297%	25.050	4.525	6.557	28.550	40.870	0.722%	1.114%
%RSD		2.203	1.163	0.870	1.264	1.464	2.023	1.081	1.660
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:46:28	44.920	43.760	18.190	18.530	18.150	72.143%		
2	20:46:55	48.340	46.860	19.470	19.280	19.280	70.032%		
3	20:47:21	48.070	46.480	19.680	19.460	19.330	71.051%		
X		47.110	45.700	19.110	19.090	18.920	71.075%		
σ		1.905	1.687	0.809	0.494	0.666	1.056%		
%RSD		4.044	3.692	4.230	2.589	3.522	1.486		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:47	61.138%	50.890	960.200	996.100	0.000	50090.000	47700.000	47690.000
2	20:51:13	64.203%	50.050	972.400	972.300	0.000	49160.000	47320.000	47270.000
3	20:51:40	61.920%	50.500	976.400	1010.000	0.000	50640.000	48370.000	48800.000
X		62.420%	50.480	969.700	992.600	0.000	49960.000	47800.000	47920.000
		1.592%	0.421	8.450	18.840	0.000	744.800	527.000	791.300
		2.551	0.833	0.872	1.898	0.000	1.491	1.103	1.651
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:47	1891.000	10030.000	0.000	51340.000	50000.000	48690.000	56.011%	1032.000
2	20:51:13	1886.000	9786.000	0.000	51430.000	50590.000	49320.000	57.338%	1035.000
3	20:51:40	1952.000	10060.000	0.000	52820.000	52240.000	49940.000	56.698%	1057.000
X		1909.000	9955.000	0.000	51860.000	50940.000	49320.000	56.682%	1041.000
		36.560	147.700	0.000	828.300	1163.000	621.000	0.663%	13.500
		1.915	1.483	0.000	1.597	2.283	1.259	1.171	1.297
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:47	498.600	195.000	458.000	1003.000	1094.000	499.800	492.000	251.000
2	20:51:13	501.300	197.100	458.300	1016.000	1104.000	504.000	496.800	254.600
3	20:51:40	503.900	200.400	464.000	1032.000	1098.000	509.200	504.100	255.600
X		501.300	197.500	460.100	1017.000	1098.000	504.300	497.600	253.700
		2.643	2.746	3.359	14.540	4.867	4.729	6.055	2.402
		0.527	1.390	0.730	1.430	0.443	0.938	1.217	0.947
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:47	247.600	497.400	495.200	39.300	6.750	7.829	0.000	1018.000
2	20:51:13	246.300	501.400	500.700	39.360	8.914	6.265	0.000	1035.000
3	20:51:40	249.900	507.800	501.700	39.380	9.719	7.521	0.000	1034.000
X		248.000	502.200	499.200	39.350	8.461	7.205	0.000	1029.000
		1.847	5.254	3.484	0.044	1.535	0.829	0.000	9.626
		0.745	1.046	0.698	0.112	18.140	11.500	0.000	0.935
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:47	56.808%	990.100	990.400	56.687%	51.650	51.640	52.340	38.500
2	20:51:13	58.806%	1024.000	1026.000	58.492%	51.240	51.920	52.650	37.230
3	20:51:40	59.329%	1059.000	1060.000	58.015%	52.250	52.000	54.320	38.130
X		58.314%	1025.000	1026.000	57.731%	51.710	51.850	53.100	37.960
		1.330%	34.420	34.730	0.935%	0.508	0.186	1.066	0.652
		2.281	3.359	3.386	1.620	0.982	0.358	2.008	1.718
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:50:47	56.100%	2220.000	537.300	538.900	1988.000	2078.000	65.282%	64.441%
2	20:51:13	57.249%	2259.000	545.300	545.000	2018.000	2107.000	66.389%	66.612%
3	20:51:40	57.207%	2286.000	545.400	552.300	2040.000	2133.000	66.460%	67.062%
X		56.852%	2255.000	542.700	545.400	2016.000	2106.000	66.043%	66.038%
		0.652%	33.240	4.632	6.692	26.110	27.310	0.661%	1.402%
		1.147	1.474	0.854	1.227	1.295	1.297	1.000	2.123
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:50:47	49.800	48.160	20.540	20.130	20.180	66.134%		
2	20:51:13	50.150	47.810	20.360	20.390	20.170	67.239%		
3	20:51:40	53.480	50.720	22.210	21.630	21.590	64.571%		
X		51.140	48.900	21.040	20.720	20.640	65.981%		
		2.030	1.587	1.020	0.803	0.819	1.341%		
		3.970	3.245	4.849	3.877	3.969	2.032		



CCV 1467888 1/29/2015 8:54:37 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:03	63.082%	99.090	104.600	103.000	0.000	49230.000	47330.000	47390.000
2	20:55:30	63.891%	102.300	99.780	104.400	0.000	50050.000	48380.000	48230.000
3	20:55:57	65.894%	100.500	107.100	107.000	0.000	49370.000	47850.000	47970.000
X		64.289%	100.619%	103.846%	104.792%	0.000	99.097%	95.707%	95.727%
σ		1.448%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.252	1.613	3.596	1.908	0.000	0.884	1.096	0.901
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:03	460.800	5189.000	0.000	50630.000	48800.000	46990.000	58.296%	100.900
2	20:55:30	469.300	5233.000	0.000	50040.000	49560.000	47590.000	60.229%	102.900
3	20:55:57	465.900	5226.000	0.000	50680.000	50460.000	48590.000	60.297%	104.200
X		93.065%	104.318%	0.000	100.899%	99.215%	95.449%	59.607%	102.676%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.136%	n/a
%RSD		0.919	0.448	0.000	0.710	1.677	1.699	1.906	1.624
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:03	94.840	94.660	449.900	24840.000	22710.000	97.370	98.890	98.730
2	20:55:30	96.040	97.240	461.800	25420.000	23470.000	99.160	98.560	100.600
3	20:55:57	97.760	97.990	463.100	25480.000	23360.000	99.190	99.910	100.600
X		96.215%	96.629%	91.653%	100.984%	92.724%	98.574%	99.119%	99.993%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.526	1.805	1.582	1.383	1.778	1.058	0.711	1.094
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:03	97.200	97.560	99.820	96.120	99.940	93.440	0.000	94.180
2	20:55:30	98.670	100.700	101.000	100.600	99.980	92.100	0.000	95.190
3	20:55:57	98.060	100.500	99.870	99.440	100.400	96.690	0.000	95.340
X		97.978%	99.582%	100.240%	98.737%	100.123%	94.078%	0.000	94.903%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.757	1.762	0.683	2.377	0.283	2.506	0.000	0.666
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:03	59.158%	108.700	107.000	59.538%	101.700	99.100	99.520	95.370
2	20:55:30	61.590%	111.500	109.300	61.970%	99.690	99.470	98.520	96.440
3	20:55:57	61.265%	111.000	111.600	60.946%	101.400	101.100	101.700	97.080
X		60.671%	110.381%	109.308%	60.818%	100.935%	99.894%	99.904%	96.297%
σ		1.320%	n/a	n/a	1.221%	n/a	n/a	n/a	n/a
%RSD		2.176	1.346	2.093	2.007	1.081	1.070	1.614	0.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:55:03	59.027%	105.000	98.090	100.200	97.120	97.950	66.288%	67.086%
2	20:55:30	62.560%	103.400	99.520	99.350	96.330	99.210	68.056%	69.715%
3	20:55:57	61.665%	105.100	99.180	101.400	96.060	99.270	68.682%	68.803%
X		61.084%	104.529%	98.929%	100.319%	96.502%	98.810%	67.676%	68.535%
σ		1.837%	n/a	n/a	n/a	n/a	n/a	1.241%	1.335%
%RSD		3.007	0.905	0.753	1.054	0.571	0.758	1.834	1.948
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	20:55:03	100.800	97.350	99.910	98.460	99.450	67.014%		
2	20:55:30	101.100	97.360	100.600	101.500	100.600	70.008%		
3	20:55:57	102.000	99.090	103.200	102.100	102.900	67.914%		
X		101.325%	97.932%	101.231%	100.691%	100.981%	68.312%		
σ		n/a	n/a	n/a	n/a	n/a	1.536%		
%RSD		0.617	1.024	1.682	1.944	1.744	2.249		

CCB6 1/29/2015 9:02:03 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:30	68.848%	0.070	3.352	3.171	0.000	-44.020	3.251	2.529
2	21:02:56	70.521%	0.068	4.991	2.706	0.000	-47.210	2.490	1.745
3	21:03:23	70.105%	0.093	3.750	2.717	0.000	-44.510	0.038	2.744
X		69.825%	0.077	4.031	2.865	0.000	-45.250	1.926	2.339
σ		0.871%	0.014	0.855	0.265	0.000	1.721	1.679	0.526
%RSD		1.248	18.120	21.200	9.259	0.000	3.803	87.170	22.470
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:30	1.231	-3.520	0.000	-39.520	30.480	25.890	61.959%	2.059
2	21:02:56	1.226	-5.882	0.000	-42.030	29.420	34.530	63.327%	2.554
3	21:03:23	1.326	-5.997	0.000	-40.070	20.080	27.940	64.021%	2.301
X		1.261	-5.133	0.000	-40.540	26.660	29.450	63.102%	2.305
σ		0.056	1.398	0.000	1.322	5.725	4.514	1.049%	0.248
%RSD		4.456	27.240	0.000	3.261	21.470	15.330	1.663	10.740
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:30	0.023	0.039	0.133	-3.050	5.684	0.022	-0.192	0.244
2	21:02:56	0.013	-0.048	0.139	-4.432	-2.699	0.030	-0.005	0.227
3	21:03:23	0.025	-0.011	0.146	-5.006	1.101	0.037	-0.142	0.444
X		0.021	-0.007	0.139	-4.163	1.362	0.030	-0.113	0.305
σ		0.006	0.043	0.007	1.005	4.198	0.008	0.097	0.121
%RSD		30.500	633.400	4.718	24.150	308.200	25.820	85.400	39.530
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:30	0.209	0.454	0.507	-0.403	-2.176	-2.359	0.000	0.088
2	21:02:56	0.210	0.481	0.403	-0.164	-1.445	-0.904	0.000	0.072
3	21:03:23	0.111	0.343	0.519	0.122	-1.331	0.848	0.000	0.081
X		0.177	0.426	0.477	-0.148	-1.651	-0.805	0.000	0.081
σ		0.057	0.073	0.064	0.263	0.458	1.606	0.000	0.008
%RSD		32.270	17.130	13.380	177.300	27.770	199.500	0.000	9.935
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:30	64.004%	0.652	0.602	65.519%	-0.025	-0.009	0.001	-2.294
2	21:02:56	65.365%	0.751	0.721	67.094%	0.000	-0.010	0.017	-2.339
3	21:03:23	66.200%	0.818	0.803	68.248%	-0.005	-0.017	0.001	-2.304
X		65.190%	0.741	0.709	66.954%	-0.010	-0.012	0.006	-2.312
σ		1.108%	0.084	0.101	1.370%	0.014	0.004	0.009	0.024
%RSD		1.700	11.280	14.230	2.046	135.900	34.470	147.000	1.016
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:02:30	63.991%	1.005	0.213	0.184	0.068	0.123	71.012%	70.052%
2	21:02:56	65.331%	1.247	0.201	0.184	0.090	0.119	73.367%	72.472%
3	21:03:23	66.622%	1.243	0.217	0.237	0.064	0.105	72.430%	73.282%
X		65.315%	1.165	0.210	0.202	0.074	0.116	72.270%	71.936%
σ		1.316%	0.139	0.009	0.030	0.014	0.010	1.186%	1.680%
%RSD		2.014	11.900	4.045	15.040	18.920	8.457	1.641	2.336
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:02:30	0.021	0.019	0.020	0.001	0.011	75.177%		
2	21:02:56	0.014	0.024	0.023	0.022	0.018	75.209%		
3	21:03:23	0.020	0.019	0.038	0.018	0.021	75.541%		
X		0.018	0.021	0.027	0.014	0.017	75.309%		
σ		0.004	0.003	0.010	0.011	0.006	0.202%		
%RSD		20.630	12.920	37.340	79.750	33.030	0.268		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:47	61.568%	0.247	4759.000	4887.000	0.000	464700.000	19010.000	19140.000
2	21:07:14	61.807%	0.218	4854.000	4961.000	0.000	463700.000	19090.000	19140.000
3	21:07:40	62.056%	0.078	4889.000	4939.000	0.000	458300.000	19030.000	18940.000
X		61.810%	0.181	4834.000	4929.000	0.000	462200.000	19050.000	19080.000
σ		0.244%	0.090	67.010	38.280	0.000	3438.000	37.500	115.200
%RSD		0.395	49.970	1.386	0.777	0.000	0.744	0.197	0.604
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:47	797.800	5706.000	0.000	1424.000	24720.000	22690.000	55.822%	24.360
2	21:07:14	804.600	5672.000	0.000	1397.000	24960.000	23030.000	56.845%	24.040
3	21:07:40	798.600	5580.000	0.000	1382.000	25160.000	23060.000	56.562%	25.070
X		800.300	5653.000	0.000	1401.000	24950.000	22920.000	56.410%	24.490
σ		3.715	65.360	0.000	21.370	220.000	204.300	0.528%	0.526
%RSD		0.464	1.156	0.000	1.526	0.882	0.891	0.937	2.148
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:47	61.550	156.600	34.250	1808.000	1654.000	138.800	15.020	57.050
2	21:07:14	62.730	157.600	34.770	1867.000	1651.000	137.300	14.380	57.650
3	21:07:40	61.170	156.500	34.080	1804.000	1687.000	137.700	13.600	57.700
X		61.820	156.900	34.370	1826.000	1664.000	138.000	14.330	57.470
σ		0.819	0.622	0.358	35.660	19.930	0.775	0.713	0.357
%RSD		1.324	0.396	1.041	1.953	1.198	0.562	4.974	0.621
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:47	57.120	130.700	131.200	2.192	1.987	0.074	0.000	30.440
2	21:07:14	56.640	132.400	128.900	0.168	-0.598	0.860	0.000	30.130
3	21:07:40	56.520	130.900	130.200	1.190	0.515	-0.691	0.000	30.440
X		56.760	131.300	130.100	1.183	0.635	0.081	0.000	30.340
σ		0.319	0.940	1.120	1.012	1.297	0.776	0.000	0.180
%RSD		0.562	0.716	0.861	85.530	204.300	956.800	0.000	0.594
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:47	57.435%	402.300	400.700	57.125%	1.402	1.321	5.821	3.327
2	21:07:14	58.653%	413.300	413.400	57.731%	1.302	1.349	5.786	3.144
3	21:07:40	58.461%	420.800	417.400	58.436%	1.268	1.298	5.828	3.274
X		58.183%	412.200	410.500	57.764%	1.324	1.323	5.812	3.249
σ		0.655%	9.285	8.736	0.656%	0.070	0.025	0.022	0.094
%RSD		1.126	2.253	2.128	1.135	5.269	1.903	0.385	2.907
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:06:47	57.046%	3.195	1.324	1.157	8.631	8.726	64.391%	65.460%
2	21:07:14	58.511%	3.311	1.222	1.162	9.002	8.922	65.765%	66.771%
3	21:07:40	58.496%	3.259	1.108	1.102	9.439	9.041	66.485%	67.448%
X		58.018%	3.255	1.218	1.141	9.024	8.896	65.547%	66.560%
σ		0.841%	0.058	0.108	0.033	0.404	0.160	1.064%	1.011%
%RSD		1.450	1.784	8.876	2.926	4.481	1.793	1.623	1.519
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:06:47	0.071	0.022	12.240	11.230	11.520	71.932%		
2	21:07:14	0.068	0.023	13.020	12.250	12.440	68.725%		
3	21:07:40	0.068	0.021	12.840	12.550	12.720	66.932%		
X		0.069	0.022	12.700	12.010	12.230	69.196%		
σ		0.001	0.001	0.407	0.694	0.625	2.533%		
%RSD		1.955	4.455	3.203	5.776	5.111	3.661		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:07	60.967%	0.051	115.600	111.300	0.000	62000.000	27900.000	28270.000
2	21:11:34	60.466%	0.023	109.000	116.100	0.000	62700.000	28730.000	29200.000
3	21:12:01	63.493%	0.022	105.500	109.400	0.000	61480.000	28290.000	28630.000
X		61.642%	0.032	110.000	112.300	0.000	62060.000	28310.000	28700.000
σ		1.622%	0.017	5.084	3.473	0.000	613.900	412.000	466.000
%RSD		2.632	52.220	4.621	3.094	0.000	0.989	1.455	1.624
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:07	11.340	8069.000	0.000	4702.000	150000.000	150300.000	54.653%	2.493
2	21:11:34	11.640	8199.000	0.000	4701.000	150700.000	150900.000	55.931%	2.274
3	21:12:01	11.310	8034.000	0.000	4636.000	151400.000	154900.000	55.969%	2.093
X		11.430	8101.000	0.000	4680.000	150700.000	152000.000	55.518%	2.287
σ		0.186	87.080	0.000	37.600	709.800	2539.000	0.749%	0.200
%RSD		1.623	1.075	0.000	0.803	0.471	1.670	1.349	8.747
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:07	0.569	0.283	2.219	2.336	594.300	0.521	2.957	1.040
2	21:11:34	0.037	0.231	2.483	0.226	581.300	0.460	3.356	1.103
3	21:12:01	0.427	0.189	2.568	-2.719	565.400	0.558	3.310	1.036
X		0.344	0.235	2.424	-0.052	580.400	0.513	3.208	1.060
σ		0.276	0.047	0.182	2.539	14.480	0.049	0.218	0.038
%RSD		80.010	19.930	7.505	4873.000	2.494	9.584	6.808	3.553
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:07	1.381	18.440	18.500	0.922	-0.546	3.406	0.000	717.700
2	21:11:34	1.185	19.370	19.340	0.794	1.660	-0.843	0.000	736.700
3	21:12:01	1.503	19.050	18.490	1.179	0.327	-0.387	0.000	727.000
X		1.356	18.950	18.780	0.965	0.480	0.725	0.000	727.200
σ		0.160	0.473	0.490	0.196	1.111	2.333	0.000	9.493
%RSD		11.820	2.494	2.611	20.280	231.300	321.600	0.000	1.306
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:07	57.021%	5.662	5.582	57.035%	-0.019	-0.014	0.050	-2.261
2	21:11:34	58.251%	5.531	5.187	58.506%	-0.020	-0.012	0.002	-2.253
3	21:12:01	59.590%	4.874	4.773	58.270%	-0.018	0.001	0.056	-2.237
X		58.287%	5.356	5.181	57.937%	-0.019	-0.008	0.036	-2.250
σ		1.285%	0.422	0.405	0.790%	0.001	0.008	0.030	0.012
%RSD		2.205	7.884	7.817	1.364	5.256	98.220	82.160	0.546
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:11:07	55.972%	0.622	1.819	1.851	56.720	59.620	66.460%	66.270%
2	21:11:34	58.195%	0.721	1.824	1.743	59.260	59.360	66.122%	66.758%
3	21:12:01	60.172%	0.684	1.686	1.633	56.930	58.410	68.250%	67.123%
X		58.113%	0.675	1.776	1.742	57.640	59.130	66.944%	66.717%
σ		2.101%	0.050	0.078	0.109	1.411	0.636	1.143%	0.428%
%RSD		3.616	7.384	4.402	6.251	2.448	1.076	1.708	0.642
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:11:07	0.012	0.004	0.022	0.011	0.022	65.907%		
2	21:11:34	0.007	0.007	0.028	0.028	0.031	67.516%		
3	21:12:01	0.005	0.003	0.034	0.010	0.021	67.971%		
X		0.008	0.005	0.028	0.016	0.025	67.132%		
σ		0.004	0.002	0.006	0.010	0.006	1.085%		
%RSD		44.630	39.210	21.020	61.150	23.580	1.616		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:23	63.433%	0.158	30.020	26.910	0.000	81390.000	93.160	92.960
2	21:15:49	63.029%	0.104	29.970	28.570	0.000	83570.000	93.370	97.850
3	21:16:16	65.400%	0.153	25.610	28.140	0.000	83390.000	98.320	93.030
X		63.954%	0.138	28.530	27.880	0.000	82780.000	94.950	94.610
σ		1.268%	0.030	2.530	0.863	0.000	1210.000	2.921	2.807
%RSD		1.983	21.630	8.867	3.095	0.000	1.462	3.076	2.967
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:23	49.980	51090.000	0.000	181.800	536.500	861.900	57.956%	8.018
2	21:15:49	52.560	52070.000	0.000	190.200	577.000	838.600	58.841%	7.878
3	21:16:16	52.690	52420.000	0.000	189.700	618.400	845.100	58.470%	7.552
X		51.740	51860.000	0.000	187.300	577.300	848.500	58.422%	7.816
σ		1.530	687.100	0.000	4.707	40.920	12.030	0.444%	0.239
%RSD		2.958	1.325	0.000	2.514	7.088	1.418	0.761	3.060
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:23	0.947	0.279	8.363	104.700	105.200	0.079	0.998	2.378
2	21:15:49	0.982	0.238	8.555	108.500	101.500	0.100	1.096	2.506
3	21:16:16	1.122	0.227	8.727	109.600	108.900	0.121	1.190	2.495
X		1.017	0.248	8.548	107.600	105.200	0.100	1.095	2.459
σ		0.093	0.027	0.182	2.543	3.703	0.021	0.096	0.071
%RSD		9.100	10.950	2.129	2.363	3.519	21.200	8.789	2.885
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:23	2.301	2.413	2.445	9.565	-0.941	-2.922	0.000	2.658
2	21:15:49	2.266	2.513	2.181	9.642	-1.802	-1.873	0.000	2.639
3	21:16:16	2.293	2.391	2.317	9.616	-1.819	-1.541	0.000	2.618
X		2.287	2.439	2.314	9.608	-1.521	-2.112	0.000	2.638
σ		0.018	0.065	0.132	0.039	0.502	0.721	0.000	0.020
%RSD		0.786	2.673	5.721	0.410	33.020	34.130	0.000	0.759
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:23	57.976%	1.689	1.500	58.406%	-0.023	-0.008	0.038	-2.260
2	21:15:49	59.702%	1.911	1.610	60.459%	-0.019	0.002	0.082	-2.297
3	21:16:16	61.137%	1.538	1.656	60.763%	-0.002	-0.016	0.063	-2.185
X		59.605%	1.713	1.589	59.876%	-0.014	-0.007	0.061	-2.247
σ		1.583%	0.188	0.080	1.282%	0.011	0.009	0.022	0.057
%RSD		2.656	10.970	5.024	2.142	76.780	126.500	36.040	2.538
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:23	60.111%	0.318	2.606	2.692	1.423	1.682	67.080%	67.414%
2	21:15:49	60.562%	0.343	2.677	2.805	1.750	1.646	68.250%	68.967%
3	21:16:16	61.904%	0.384	2.562	2.856	1.447	1.616	70.578%	69.994%
X		60.859%	0.348	2.615	2.784	1.540	1.648	68.636%	68.792%
σ		0.933%	0.033	0.058	0.084	0.183	0.033	1.781%	1.299%
%RSD		1.533	9.464	2.205	3.019	11.850	1.999	2.594	1.888
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:15:23	0.003	0.010	10.160	9.513	9.587	69.794%		
2	21:15:49	0.010	0.003	10.830	9.736	10.200	69.151%		
3	21:16:16	0.000	0.010	10.590	9.925	10.090	71.055%		
X		0.004	0.008	10.530	9.725	9.958	70.000%		
σ		0.005	0.004	0.342	0.206	0.326	0.969%		
%RSD		120.800	48.350	3.245	2.123	3.272	1.384		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:37	62.296%	0.050	24.150	24.280	0.000	83810.000	75.940	79.110
2	21:20:04	64.799%	0.021	26.330	27.290	0.000	83780.000	79.070	78.970
3	21:20:30	64.321%	0.102	22.870	25.720	0.000	84700.000	75.130	81.920
X		63.805%	0.058	24.450	25.760	0.000	84100.000	76.720	80.000
σ		1.329%	0.041	1.751	1.504	0.000	523.700	2.081	1.663
%RSD		2.083	71.080	7.159	5.839	0.000	0.623	2.713	2.078
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:37	37.340	60980.000	0.000	204.200	508.700	869.900	57.458%	8.641
2	21:20:04	37.670	62340.000	0.000	201.300	582.400	865.200	58.540%	8.294
3	21:20:30	39.000	63820.000	0.000	204.900	577.200	870.200	59.102%	8.967
X		38.000	62380.000	0.000	203.500	556.100	868.400	58.367%	8.634
σ		0.878	1423.000	0.000	1.881	41.140	2.755	0.835%	0.337
%RSD		2.311	2.281	0.000	0.925	7.399	0.317	1.431	3.897
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:37	1.032	0.189	6.914	73.250	76.730	0.062	1.090	2.377
2	21:20:04	1.057	0.201	7.179	75.490	80.450	0.062	1.055	2.136
3	21:20:30	0.970	0.104	7.215	74.240	76.140	0.103	1.323	2.228
X		1.020	0.165	7.103	74.330	77.780	0.076	1.156	2.247
σ		0.045	0.053	0.165	1.124	2.336	0.024	0.145	0.122
%RSD		4.376	32.180	2.315	1.512	3.004	31.640	12.570	5.410
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:37	2.097	2.053	2.124	9.381	-0.483	-4.620	0.000	2.445
2	21:20:04	2.097	1.483	1.720	9.219	-0.566	-2.913	0.000	2.478
3	21:20:30	1.924	1.866	1.838	8.969	-0.822	-4.274	0.000	2.525
X		2.039	1.801	1.894	9.190	-0.624	-3.936	0.000	2.482
σ		0.100	0.291	0.208	0.208	0.177	0.902	0.000	0.040
%RSD		4.892	16.130	10.950	2.259	28.350	22.920	0.000	1.620
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:37	58.031%	1.156	1.084	57.948%	-0.008	-0.001	0.039	-2.228
2	21:20:04	59.299%	1.045	1.142	59.206%	-0.016	-0.006	0.020	-2.224
3	21:20:30	60.699%	1.298	1.285	60.108%	-0.023	-0.016	0.072	-2.400
X		59.343%	1.167	1.170	59.087%	-0.016	-0.007	0.044	-2.284
σ		1.335%	0.127	0.104	1.085%	0.007	0.008	0.026	0.100
%RSD		2.250	10.870	8.865	1.836	46.670	103.500	60.620	4.382
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:19:37	58.809%	0.312	3.084	3.053	1.445	1.369	66.743%	66.675%
2	21:20:04	59.556%	0.360	3.010	3.238	1.363	1.727	67.469%	68.117%
3	21:20:30	61.474%	0.324	3.260	3.234	1.457	1.729	69.125%	69.284%
X		59.947%	0.332	3.118	3.175	1.422	1.608	67.779%	68.026%
σ		1.374%	0.025	0.128	0.105	0.051	0.207	1.221%	1.307%
%RSD		2.293	7.530	4.114	3.320	3.610	12.880	1.801	1.921
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:19:37	0.007	0.008	9.283	8.213	8.617	68.867%		
2	21:20:04	0.010	0.009	9.445	8.628	8.859	69.995%		
3	21:20:30	0.006	0.008	9.676	8.679	9.025	71.585%		
X		0.008	0.008	9.468	8.507	8.834	70.149%		
σ		0.002	0.000	0.198	0.256	0.205	1.366%		
%RSD		28.480	5.360	2.086	3.009	2.320	1.947		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:52	65.423%	0.074	17.770	18.280	0.000	81630.000	60.610	56.250
2	21:24:18	66.855%	0.046	22.000	19.230	0.000	81740.000	56.220	54.490
3	21:24:44	67.376%	0.148	19.190	20.260	0.000	82730.000	54.930	58.330
X		66.552%	0.089	19.660	19.250	0.000	82030.000	57.250	56.360
σ		1.011%	0.053	2.154	0.990	0.000	608.200	2.974	1.924
%RSD		1.519	59.160	10.960	5.141	0.000	0.741	5.194	3.414
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:52	44.010	46840.000	0.000	148.400	329.200	567.300	59.300%	7.508
2	21:24:18	45.140	48070.000	0.000	144.100	338.400	562.400	60.966%	7.956
3	21:24:44	45.750	48920.000	0.000	146.100	303.800	566.600	61.653%	6.447
X		44.970	47940.000	0.000	146.200	323.800	565.400	60.640%	7.303
σ		0.881	1046.000	0.000	2.147	17.920	2.632	1.210%	0.775
%RSD		1.960	2.182	0.000	1.468	5.533	0.466	1.995	10.610
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:52	1.107	0.120	14.910	103.700	95.220	0.114	1.231	2.463
2	21:24:18	1.290	0.187	15.250	106.900	102.400	0.130	0.819	2.420
3	21:24:44	1.032	0.148	14.960	105.200	99.100	0.119	1.295	2.457
X		1.143	0.151	15.040	105.300	98.900	0.121	1.115	2.447
σ		0.133	0.034	0.180	1.611	3.592	0.008	0.258	0.023
%RSD		11.610	22.280	1.194	1.530	3.632	6.931	23.170	0.953
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:52	2.049	2.249	1.751	4.365	-1.378	-4.947	0.000	1.164
2	21:24:18	2.326	1.811	1.683	4.968	-1.499	-3.477	0.000	1.153
3	21:24:44	2.126	1.709	1.556	5.228	-1.757	-1.917	0.000	1.218
X		2.167	1.923	1.663	4.854	-1.545	-3.447	0.000	1.178
σ		0.143	0.287	0.099	0.443	0.194	1.515	0.000	0.035
%RSD		6.596	14.920	5.952	9.126	12.540	43.950	0.000	2.940
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:52	60.703%	1.104	0.959	61.666%	-0.011	-0.012	0.072	-2.320
2	21:24:18	62.313%	1.089	0.972	62.386%	-0.018	-0.006	0.027	-2.205
3	21:24:44	63.979%	0.971	1.104	63.329%	-0.014	-0.032	0.060	-2.304
X		62.332%	1.054	1.012	62.461%	-0.014	-0.017	0.053	-2.276
σ		1.638%	0.073	0.080	0.834%	0.004	0.014	0.023	0.062
%RSD		2.628	6.884	7.930	1.335	24.980	82.510	44.050	2.741
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:23:52	61.364%	0.248	1.875	2.007	1.569	1.547	68.818%	69.300%
2	21:24:18	63.800%	0.261	2.071	2.048	1.487	1.615	70.071%	71.834%
3	21:24:44	65.125%	0.288	2.036	2.088	1.644	1.594	72.240%	74.079%
X		63.430%	0.266	1.994	2.048	1.567	1.585	70.376%	71.738%
σ		1.908%	0.020	0.105	0.040	0.079	0.035	1.731%	2.391%
%RSD		3.007	7.541	5.245	1.967	5.033	2.206	2.460	3.333
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:23:52	0.004	0.006	6.529	5.655	5.989	73.349%		
2	21:24:18	0.002	0.003	6.302	5.899	6.029	75.077%		
3	21:24:44	0.013	0.005	6.514	6.032	6.209	74.706%		
X		0.006	0.004	6.448	5.862	6.076	74.377%		
σ		0.006	0.002	0.127	0.191	0.117	0.910%		
%RSD		91.040	37.010	1.967	3.262	1.922	1.223		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:28:07	65.078%	0.180	20.520	20.510	0.000	89230.000	31.100	34.680
2	21:28:33	68.132%	0.045	20.930	21.060	0.000	88610.000	31.590	31.330
3	21:29:00	68.839%	0.095	17.020	18.900	0.000	88150.000	30.590	33.030
X		67.350%	0.107	19.490	20.160	0.000	88660.000	31.090	33.010
σ		1.999%	0.068	2.151	1.125	0.000	540.700	0.497	1.676
%RSD		2.968	63.930	11.040	5.582	0.000	0.610	1.599	5.077
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:28:07	12.060	49770.000	0.000	162.000	335.900	556.400	60.948%	6.631
2	21:28:33	12.320	50760.000	0.000	166.500	338.000	589.700	62.094%	6.617
3	21:29:00	12.800	50980.000	0.000	157.600	361.800	561.300	62.693%	6.578
X		12.390	50510.000	0.000	162.000	345.200	569.200	61.912%	6.609
σ		0.373	644.200	0.000	4.446	14.370	17.980	0.887%	0.028
%RSD		3.007	1.276	0.000	2.744	4.161	3.158	1.432	0.418
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:28:07	1.320	0.203	9.375	46.740	43.830	0.057	1.088	1.303
2	21:28:33	1.455	0.207	9.691	47.590	42.270	0.102	1.320	1.404
3	21:29:00	1.401	0.176	9.643	46.600	43.770	0.098	1.219	1.384
X		1.392	0.195	9.569	46.980	43.290	0.085	1.209	1.364
σ		0.068	0.017	0.170	0.536	0.882	0.025	0.116	0.054
%RSD		4.881	8.498	1.779	1.142	2.037	29.260	9.626	3.944
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:28:07	1.000	1.884	2.256	5.457	-2.138	-2.169	0.000	1.188
2	21:28:33	1.083	2.307	2.184	5.260	-0.476	-2.603	0.000	1.166
3	21:29:00	1.114	2.021	2.306	5.204	-0.765	-4.032	0.000	1.092
X		1.065	2.071	2.248	5.307	-1.127	-2.935	0.000	1.149
σ		0.059	0.216	0.062	0.133	0.888	0.975	0.000	0.051
%RSD		5.565	10.430	2.736	2.504	78.800	33.220	0.000	4.406
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:28:07	62.783%	1.213	1.093	62.617%	-0.026	-0.003	0.019	-2.266
2	21:28:33	64.263%	1.288	1.251	63.620%	-0.027	-0.015	0.035	-2.243
3	21:29:00	64.568%	1.440	1.296	65.046%	-0.019	-0.015	0.043	-2.299
X		63.871%	1.314	1.213	63.761%	-0.024	-0.011	0.032	-2.270
σ		0.955%	0.116	0.107	1.220%	0.004	0.007	0.012	0.028
%RSD		1.495	8.805	8.798	1.914	18.100	60.840	38.100	1.237
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:28:07	61.839%	0.236	2.012	2.186	1.669	1.355	71.402%	72.234%
2	21:28:33	63.440%	0.168	2.106	2.221	1.518	1.354	73.831%	74.060%
3	21:29:00	64.191%	0.252	2.123	2.253	1.367	1.369	74.395%	75.454%
X		63.157%	0.218	2.080	2.220	1.518	1.359	73.210%	73.916%
σ		1.201%	0.045	0.060	0.034	0.151	0.008	1.590%	1.615%
%RSD		1.902	20.400	2.878	1.518	9.948	0.624	2.172	2.185
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:28:07	0.001	0.000	1.469	1.315	1.361	74.946%		
2	21:28:33	0.002	0.003	1.550	1.410	1.404	74.684%		
3	21:29:00	0.008	-0.001	1.402	1.268	1.337	75.769%		
X		0.004	0.001	1.474	1.331	1.367	75.133%		
σ		0.004	0.002	0.074	0.072	0.034	0.566%		
%RSD		95.080	232.100	5.043	5.429	2.490	0.753		



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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:22	68.093%	0.096	22.420	24.400	0.000	74550.000	101.700	100.900
2	21:32:48	68.549%	0.070	24.340	24.550	0.000	75800.000	101.300	102.200
3	21:33:15	69.307%	0.069	24.370	23.560	0.000	75450.000	108.000	104.200
X		68.650%	0.078	23.710	24.170	0.000	75270.000	103.700	102.400
σ		0.613%	0.015	1.117	0.535	0.000	644.200	3.732	1.704
%RSD		0.893	19.460	4.713	2.216	0.000	0.856	3.601	1.663
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:22	59.860	69350.000	0.000	201.500	633.300	994.900	61.815%	7.936
2	21:32:48	56.890	72500.000	0.000	224.700	668.700	1041.000	62.789%	7.955
3	21:33:15	59.320	73210.000	0.000	218.900	724.000	996.200	63.998%	7.757
X		58.690	71690.000	0.000	215.000	675.300	1011.000	62.867%	7.883
σ		1.586	2050.000	0.000	12.090	45.700	26.070	1.094%	0.110
%RSD		2.702	2.860	0.000	5.621	6.767	2.580	1.740	1.389
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:22	0.579	0.172	3.764	74.350	76.260	0.033	0.697	2.001
2	21:32:48	0.592	0.177	3.674	77.260	76.180	0.083	0.760	1.911
3	21:33:15	0.724	0.145	3.746	76.540	71.690	0.068	0.826	2.078
X		0.632	0.165	3.728	76.050	74.710	0.061	0.761	1.997
σ		0.080	0.017	0.048	1.514	2.620	0.026	0.065	0.083
%RSD		12.690	10.430	1.278	1.991	3.507	41.580	8.522	4.170
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:22	1.795	1.544	1.394	11.930	-1.214	-1.711	0.000	3.130
2	21:32:48	1.461	1.915	1.757	11.200	-0.146	-1.794	0.000	3.187
3	21:33:15	1.576	1.983	2.108	11.760	-2.278	-1.533	0.000	3.240
X		1.611	1.814	1.753	11.630	-1.213	-1.679	0.000	3.186
σ		0.170	0.236	0.357	0.382	1.066	0.134	0.000	0.055
%RSD		10.530	13.010	20.340	3.287	87.880	7.961	0.000	1.724
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:22	62.124%	0.819	0.555	61.782%	0.006	-0.030	0.027	-2.267
2	21:32:48	63.197%	0.633	0.700	63.601%	-0.002	-0.008	0.086	-2.228
3	21:33:15	64.356%	0.811	0.693	64.843%	-0.002	-0.000	0.077	-2.304
X		63.226%	0.754	0.650	63.409%	0.001	-0.013	0.064	-2.266
σ		1.116%	0.106	0.082	1.540%	0.005	0.015	0.032	0.038
%RSD		1.765	13.990	12.590	2.428	647.700	117.200	49.760	1.688
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:32:22	62.394%	0.221	3.918	3.917	1.511	1.430	69.556%	70.594%
2	21:32:48	63.229%	0.243	4.218	4.070	1.471	1.464	71.660%	72.273%
3	21:33:15	63.898%	0.207	4.408	4.398	1.304	1.610	73.176%	74.062%
X		63.174%	0.224	4.181	4.129	1.429	1.501	71.464%	72.309%
σ		0.754%	0.018	0.247	0.246	0.110	0.095	1.818%	1.735%
%RSD		1.193	8.138	5.913	5.950	7.704	6.355	2.543	2.399
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:32:22	0.004	0.004	10.880	10.040	10.220	74.501%		
2	21:32:48	0.000	0.005	11.730	10.650	11.100	73.783%		
3	21:33:15	0.010	0.003	11.710	10.440	11.060	73.426%		
X		0.004	0.004	11.440	10.370	10.800	73.903%		
σ		0.005	0.001	0.485	0.310	0.496	0.548%		
%RSD		109.400	30.710	4.234	2.991	4.597	0.741		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:39	70.970%	0.043	23.090	27.080	0.000	80890.000	84.550	84.050
2	21:37:05	70.519%	0.019	26.960	24.370	0.000	83230.000	89.260	87.740
3	21:37:32	71.751%	0.091	26.040	27.430	0.000	81250.000	86.280	82.680
X		71.080%	0.051	25.360	26.290	0.000	81790.000	86.700	84.820
σ		0.624%	0.037	2.018	1.677	0.000	1261.000	2.381	2.618
%RSD		0.877	71.770	7.958	6.379	0.000	1.542	2.746	3.086
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:39	18.590	74690.000	0.000	221.200	661.600	1043.000	63.366%	6.695
2	21:37:05	19.830	78770.000	0.000	239.600	753.100	1098.000	64.240%	7.900
3	21:37:32	19.470	78750.000	0.000	231.800	693.100	1060.000	65.128%	8.573
X		19.300	77400.000	0.000	230.800	702.600	1067.000	64.245%	7.723
σ		0.641	2351.000	0.000	9.225	46.490	28.260	0.881%	0.951
%RSD		3.322	3.038	0.000	3.996	6.616	2.648	1.371	12.320
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:39	0.322	0.067	2.279	7.329	8.977	0.025	0.609	0.637
2	21:37:05	0.653	0.079	2.358	7.142	8.017	0.023	0.837	0.616
3	21:37:32	0.587	0.071	2.343	6.422	8.671	0.007	0.588	0.671
X		0.521	0.072	2.327	6.964	8.555	0.018	0.678	0.641
σ		0.175	0.006	0.042	0.479	0.491	0.010	0.138	0.027
%RSD		33.600	8.069	1.797	6.877	5.733	54.180	20.400	4.278
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:39	0.239	2.878	2.868	12.790	-0.639	-2.019	0.000	3.286
2	21:37:05	0.364	2.920	2.774	12.900	-0.814	-2.853	0.000	3.206
3	21:37:32	0.354	3.136	3.269	13.280	-0.484	-1.319	0.000	3.336
X		0.319	2.978	2.970	12.990	-0.645	-2.064	0.000	3.276
σ		0.069	0.139	0.263	0.260	0.165	0.768	0.000	0.065
%RSD		21.730	4.663	8.839	2.002	25.540	37.210	0.000	1.993
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:39	63.232%	0.435	0.538	64.058%	-0.038	-0.009	0.001	-2.314
2	21:37:05	65.991%	0.664	0.702	64.487%	-0.029	-0.026	0.001	-2.267
3	21:37:32	65.742%	0.635	0.798	65.128%	-0.025	-0.022	0.001	-2.337
X		64.988%	0.578	0.679	64.558%	-0.031	-0.019	0.001	-2.306
σ		1.526%	0.125	0.132	0.538%	0.006	0.009	0.000	0.036
%RSD		2.348	21.560	19.370	0.834	20.170	45.840	3.827	1.548
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:36:39	65.691%	0.148	4.106	3.818	1.270	1.200	71.573%	73.224%
2	21:37:05	64.776%	0.220	4.236	4.445	1.181	1.322	74.648%	74.904%
3	21:37:32	65.379%	0.205	4.291	4.281	1.293	1.247	75.536%	75.025%
X		65.282%	0.191	4.211	4.182	1.248	1.257	73.919%	74.384%
σ		0.465%	0.038	0.095	0.325	0.059	0.062	2.079%	1.007%
%RSD		0.712	19.950	2.261	7.773	4.733	4.910	2.813	1.353
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:36:39	0.001	0.000	0.876	0.746	0.784	77.588%		
2	21:37:05	-0.001	-0.000	0.900	0.883	0.848	76.695%		
3	21:37:32	0.005	0.002	0.851	0.845	0.850	75.907%		
X		0.002	0.001	0.876	0.825	0.827	76.730%		
σ		0.003	0.001	0.024	0.071	0.037	0.841%		
%RSD		195.000	189.900	2.796	8.563	4.516	1.096		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:57	71.362%	0.115	25.710	30.620	0.000	178000.000	62.390	65.720
2	21:41:24	74.424%	0.064	30.600	30.480	0.000	178000.000	64.860	66.990
3	21:41:50	76.616%	0.039	28.300	31.200	0.000	178000.000	65.200	68.180
X		74.134%	0.073	28.210	30.770	0.000	178000.000	64.150	66.960
σ		2.639%	0.039	2.446	0.379	0.000	17.740	1.530	1.227
%RSD		3.560	53.020	8.671	1.233	0.000	0.010	2.385	1.832
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:57	65.240	180100.000	0.000	112.100	395.000	1282.000	68.353%	18.880
2	21:41:24	67.500	185800.000	0.000	115.500	443.100	1247.000	70.213%	18.960
3	21:41:50	67.080	187200.000	0.000	110.300	401.500	1259.000	71.733%	17.280
X		66.610	184400.000	0.000	112.700	413.200	1263.000	70.100%	18.370
σ		1.203	3795.000	0.000	2.623	26.110	17.420	1.693%	0.946
%RSD		1.805	2.058	0.000	2.328	6.319	1.379	2.415	5.148
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:57	0.704	0.177	1.422	59.190	55.230	0.105	2.075	3.238
2	21:41:24	0.815	0.168	1.477	62.310	57.810	0.142	2.484	3.591
3	21:41:50	0.711	0.171	1.463	61.210	58.040	0.133	2.177	3.430
X		0.743	0.172	1.454	60.900	57.030	0.127	2.246	3.419
σ		0.062	0.004	0.028	1.582	1.558	0.019	0.212	0.177
%RSD		8.337	2.592	1.958	2.598	2.732	15.290	9.461	5.175
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:57	2.633	2.105	2.561	1.782	-2.195	-1.398	0.000	3.018
2	21:41:24	2.922	2.283	2.728	1.500	-0.937	-3.948	0.000	3.199
3	21:41:50	2.656	2.049	2.280	1.591	0.292	-3.088	0.000	3.070
X		2.737	2.145	2.523	1.625	-0.947	-2.811	0.000	3.095
σ		0.161	0.122	0.226	0.144	1.244	1.297	0.000	0.093
%RSD		5.879	5.701	8.974	8.872	131.400	46.140	0.000	3.009
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:57	66.769%	1.756	1.969	65.998%	0.021	0.007	0.188	-2.099
2	21:41:24	69.725%	2.011	1.978	68.649%	0.003	-0.001	0.119	-2.110
3	21:41:50	70.408%	2.185	2.050	70.267%	-0.008	0.003	0.222	-2.164
X		68.967%	1.984	1.999	68.305%	0.005	0.003	0.177	-2.124
σ		1.934%	0.216	0.045	2.155%	0.015	0.004	0.053	0.035
%RSD		2.804	10.880	2.235	3.155	297.300	130.300	29.750	1.641
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:40:57	66.342%	0.201	3.606	3.534	1.263	1.174	75.894%	76.848%
2	21:41:24	68.080%	0.162	3.740	3.892	1.295	1.349	79.886%	78.931%
3	21:41:50	70.611%	0.200	3.866	3.857	1.169	1.292	78.229%	80.698%
X		68.344%	0.188	3.737	3.761	1.243	1.272	78.003%	78.826%
σ		2.147%	0.022	0.130	0.198	0.065	0.089	2.006%	1.927%
%RSD		3.141	11.900	3.476	5.250	5.263	7.015	2.571	2.445
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:40:57	0.016	0.011	23.880	22.650	23.060	77.620%		
2	21:41:24	0.010	0.011	25.360	23.020	24.360	78.240%		
3	21:41:50	0.019	0.017	24.960	23.010	23.710	81.535%		
X		0.015	0.013	24.730	22.890	23.710	79.132%		
σ		0.005	0.003	0.764	0.213	0.650	2.104%		
%RSD		31.130	25.300	3.087	0.928	2.741	2.659		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:45:15	75.202%	-0.006	30.680	33.470	0.000	187000.000	10.080	12.820
2	21:45:41	77.001%	0.017	32.390	33.140	0.000	189200.000	11.790	14.600
3	21:46:08	77.611%	0.017	31.420	31.880	0.000	188900.000	12.710	14.260
X		76.605%	0.009	31.490	32.830	0.000	188400.000	11.530	13.890
σ		1.252%	0.013	0.858	0.838	0.000	1239.000	1.337	0.949
%RSD		1.635	139.300	2.723	2.554	0.000	0.658	11.600	6.829
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:45:15	58.820	191000.000	0.000	111.700	187.200	1130.000	71.936%	20.380
2	21:45:41	60.340	195100.000	0.000	114.800	255.100	1144.000	73.498%	19.140
3	21:46:08	61.090	200200.000	0.000	108.000	240.200	1164.000	74.043%	19.510
X		60.080	195400.000	0.000	111.500	227.500	1146.000	73.159%	19.670
σ		1.153	4606.000	0.000	3.380	35.660	17.200	1.094%	0.635
%RSD		1.918	2.357	0.000	3.031	15.670	1.501	1.495	3.227
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:45:15	0.528	0.090	0.776	2.164	-1.566	0.016	2.324	1.113
2	21:45:41	0.696	0.112	0.882	1.972	-2.632	0.001	2.015	1.321
3	21:46:08	0.399	0.076	0.849	1.765	1.765	0.035	2.527	1.175
X		0.541	0.093	0.836	1.967	-0.811	0.017	2.289	1.203
σ		0.149	0.018	0.055	0.200	2.294	0.017	0.258	0.107
%RSD		27.500	19.830	6.543	10.160	282.800	98.640	11.260	8.877
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:45:15	0.405	1.793	2.183	1.182	0.508	-3.917	0.000	3.039
2	21:45:41	0.328	1.614	2.177	1.396	-1.560	-4.242	0.000	3.077
3	21:46:08	0.490	2.012	1.986	1.588	-0.423	-2.090	0.000	2.990
X		0.408	1.807	2.115	1.389	-0.492	-3.416	0.000	3.035
σ		0.081	0.200	0.112	0.203	1.036	1.160	0.000	0.044
%RSD		19.860	11.050	5.291	14.600	210.600	33.960	0.000	1.446
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:45:15	69.402%	1.906	1.944	67.606%	-0.021	-0.025	0.001	-2.243
2	21:45:41	71.301%	2.050	1.908	69.975%	-0.014	-0.014	0.023	-2.318
3	21:46:08	72.926%	2.067	1.918	71.119%	-0.028	-0.001	0.008	-2.288
X		71.210%	2.008	1.924	69.567%	-0.021	-0.013	0.011	-2.283
σ		1.764%	0.088	0.019	1.792%	0.007	0.012	0.012	0.038
%RSD		2.477	4.402	0.968	2.575	32.950	90.480	109.300	1.664
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:45:15	69.067%	0.334	3.654	3.659	1.142	1.101	77.564%	78.498%
2	21:45:41	70.527%	0.412	3.852	3.869	1.095	1.233	80.294%	80.272%
3	21:46:08	71.385%	0.421	3.746	3.918	1.035	1.308	81.390%	82.723%
X		70.326%	0.389	3.751	3.815	1.090	1.214	79.750%	80.498%
σ		1.172%	0.048	0.099	0.138	0.054	0.105	1.970%	2.122%
%RSD		1.667	12.260	2.642	3.606	4.923	8.615	2.471	2.636
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:45:15	0.002	0.001	0.410	0.405	0.404	79.778%		
2	21:45:41	0.001	-0.001	0.420	0.442	0.418	80.169%		
3	21:46:08	0.001	0.001	0.490	0.428	0.451	79.933%		
X		0.001	0.000	0.440	0.425	0.424	79.960%		
σ		0.001	0.001	0.043	0.019	0.024	0.197%		
%RSD		49.490	576.100	9.875	4.428	5.640	0.246		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:32	73.038%	97.600	102.500	95.900	0.000	47730.000	46050.000	46430.000
2	21:49:59	76.036%	100.000	89.910	98.840	0.000	48160.000	46910.000	46870.000
3	21:50:26	74.869%	101.100	98.330	99.190	0.000	48290.000	46880.000	47050.000
X		74.648%	99.555%	96.901%	97.980%	0.000	96.123%	93.227%	93.563%
σ		1.512%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.025	1.778	6.608	1.845	0.000	0.610	1.046	0.686
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:32	448.600	5837.000	0.000	50780.000	48990.000	47550.000	67.970%	97.230
2	21:49:59	455.900	5914.000	0.000	52380.000	50790.000	49920.000	67.327%	105.000
3	21:50:26	454.200	5892.000	0.000	51310.000	51160.000	49520.000	68.758%	100.200
X		90.577%	117.615%	0.000	102.984%	100.631%	97.990%	68.018%	100.809%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.717%	n/a
%RSD		0.852	0.675	0.000	1.585	2.307	2.594	1.054	3.870
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:32	90.210	91.980	451.700	24600.000	22380.000	93.830	94.380	96.280
2	21:49:59	96.260	97.220	465.100	25410.000	23490.000	98.580	99.730	99.730
3	21:50:26	94.450	94.980	459.700	25300.000	23370.000	98.040	98.430	98.070
X		93.637%	94.728%	91.765%	100.420%	92.315%	96.816%	97.511%	98.027%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		3.317	2.773	1.471	1.741	2.621	2.685	2.857	1.756
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:32	94.760	98.570	100.200	97.840	97.230	95.340	0.000	94.100
2	21:49:59	98.200	102.600	98.460	97.730	105.700	97.240	0.000	95.650
3	21:50:26	97.050	104.700	101.200	96.920	95.400	92.740	0.000	96.220
X		96.671%	101.943%	99.949%	97.496%	99.430%	95.107%	0.000	95.321%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.811	3.045	1.379	0.516	5.498	2.377	0.000	1.151
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:32	68.914%	93.190	91.660	68.360%	99.300	99.880	100.000	97.890
2	21:49:59	69.980%	98.550	97.200	69.176%	101.700	99.390	102.500	96.930
3	21:50:26	71.128%	98.740	97.960	69.944%	100.600	99.910	101.100	97.740
X		70.007%	96.825%	95.606%	69.160%	100.535%	99.725%	101.191%	97.518%
σ		1.107%	n/a	n/a	0.792%	n/a	n/a	n/a	n/a
%RSD		1.581	3.256	3.599	1.146	1.177	0.294	1.233	0.530
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:49:32	68.600%	96.860	96.760	99.830	95.500	99.420	76.674%	76.879%
2	21:49:59	70.177%	98.600	98.270	100.400	95.330	98.880	77.481%	78.863%
3	21:50:26	70.603%	98.700	99.110	100.600	99.120	98.800	79.418%	79.501%
X		69.793%	98.053%	98.047%	100.277%	96.652%	99.034%	77.858%	78.414%
σ		1.055%	n/a	n/a	n/a	n/a	n/a	1.410%	1.368%
%RSD		1.512	1.055	1.214	0.388	2.217	0.338	1.811	1.744
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:49:32	98.650	95.950	97.050	96.210	96.900	79.084%		
2	21:49:59	99.970	98.480	101.300	100.700	100.800	77.877%		
3	21:50:26	101.100	97.490	99.410	100.300	99.780	79.293%		
X		99.908%	97.305%	99.250%	99.084%	99.174%	78.751%		
σ		n/a	n/a	n/a	n/a	n/a	0.764%		
%RSD		1.234	1.312	2.140	2.520	2.059	0.970		

CCB7 1/29/2015 9:56:34 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:57:01	74.537%	0.157	1.867	2.643	0.000	94.450	2.194	3.482
2	21:57:27	74.923%	0.064	1.855	1.911	0.000	99.610	3.551	3.521
3	21:57:54	78.045%	0.172	1.909	1.930	0.000	97.390	3.441	2.489
X		75.835%	0.131	1.877	2.162	0.000	97.150	3.062	3.164
σ		1.924%	0.059	0.029	0.417	0.000	2.590	0.754	0.585
%RSD		2.537	44.860	1.519	19.310	0.000	2.666	24.620	18.500
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:57:01	1.053	114.400	0.000	-42.490	37.870	30.090	67.279%	-0.020
2	21:57:27	1.295	138.800	0.000	-37.820	20.820	24.450	67.606%	0.033
3	21:57:54	1.165	152.600	0.000	-48.170	47.680	27.890	68.655%	0.591
X		1.171	135.300	0.000	-42.830	35.450	27.480	67.847%	0.201
σ		0.121	19.350	0.000	5.181	13.590	2.844	0.719%	0.339
%RSD		10.360	14.300	0.000	12.100	38.340	10.350	1.060	168.100
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:57:01	0.021	-0.005	0.154	-3.536	-2.019	0.020	0.001	0.189
2	21:57:27	-0.058	-0.018	0.192	-3.375	-0.986	0.045	0.231	0.253
3	21:57:54	0.055	-0.001	0.122	-4.725	-6.538	0.025	0.102	0.370
X		0.006	-0.008	0.156	-3.878	-3.181	0.030	0.111	0.271
σ		0.058	0.009	0.035	0.737	2.953	0.014	0.116	0.091
%RSD		977.700	111.800	22.420	19.010	92.830	44.930	103.800	33.750
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:57:01	0.130	0.404	0.448	-0.533	-1.322	-3.906	0.000	0.092
2	21:57:27	0.270	0.373	0.442	-0.274	-1.813	-2.156	0.000	0.086
3	21:57:54	0.217	0.528	0.381	-0.556	-0.995	-3.897	0.000	0.079
X		0.206	0.435	0.423	-0.454	-1.376	-3.320	0.000	0.085
σ		0.071	0.082	0.037	0.157	0.412	1.008	0.000	0.006
%RSD		34.330	18.870	8.800	34.460	29.920	30.350	0.000	7.459
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:57:01	69.287%	-0.310	-0.378	71.689%	-0.002	-0.012	0.000	-2.256
2	21:57:27	70.424%	-0.270	-0.342	73.347%	-0.017	0.000	0.023	-2.343
3	21:57:54	72.398%	-0.230	-0.356	73.310%	-0.014	0.005	0.008	-2.394
X		70.703%	-0.270	-0.359	72.782%	-0.011	-0.002	0.010	-2.331
σ		1.574%	0.040	0.018	0.947%	0.008	0.009	0.011	0.070
%RSD		2.227	14.810	5.037	1.301	75.800	405.000	111.900	2.987
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:57:01	70.821%	0.356	0.179	0.181	0.074	0.107	75.987%	77.512%
2	21:57:27	71.271%	0.398	0.201	0.217	0.026	0.150	76.864%	78.355%
3	21:57:54	72.920%	0.342	0.181	0.197	0.108	0.072	80.039%	79.215%
X		71.671%	0.365	0.187	0.198	0.070	0.110	77.630%	78.361%
σ		1.105%	0.029	0.012	0.018	0.041	0.039	2.132%	0.852%
%RSD		1.542	7.952	6.430	9.252	59.030	35.840	2.746	1.087
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	21:57:01	0.015	0.017	0.032	0.018	0.021	81.728%		
2	21:57:27	0.006	0.012	0.037	0.005	0.020	81.707%		
3	21:57:54	0.009	0.012	0.032	0.006	0.019	84.060%		
X		0.010	0.014	0.034	0.010	0.020	82.498%		
σ		0.004	0.003	0.003	0.007	0.001	1.353%		
%RSD		43.330	22.710	9.081	72.450	4.441	1.640		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:01:18	73.837%	0.205	21.100	18.950	0.000	107100.000	41700.000	42180.000
2	22:01:45	75.319%	-0.006	17.770	19.170	0.000	108200.000	42680.000	43140.000
3	22:02:11	74.241%	0.041	20.050	20.370	0.000	109600.000	43230.000	43530.000
X		74.466%	0.080	19.640	19.500	0.000	108300.000	42530.000	42950.000
σ		0.766%	0.111	1.699	0.762	0.000	1231.000	773.700	695.000
%RSD		1.029	138.100	8.652	3.906	0.000	1.137	1.819	1.618
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:01:18	13.590	265.500	0.000	477.400	732.600	591.600	66.727%	125.000
2	22:01:45	13.830	275.400	0.000	481.200	667.800	612.500	66.617%	123.700
3	22:02:11	13.740	283.700	0.000	486.300	633.200	625.300	67.942%	123.900
X		13.720	274.900	0.000	481.600	677.900	609.800	67.095%	124.200
σ		0.121	9.114	0.000	4.438	50.410	16.980	0.735%	0.678
%RSD		0.879	3.316	0.000	0.922	7.437	2.784	1.096	0.546
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:01:18	1.574	0.048	5.419	-9.853	-6.732	1.986	87.280	1.188
2	22:01:45	1.722	0.035	5.573	-9.256	-5.382	2.087	90.710	1.406
3	22:02:11	1.996	0.034	5.542	-8.531	-10.200	2.043	89.540	1.475
X		1.764	0.039	5.511	-9.213	-7.437	2.039	89.180	1.356
σ		0.214	0.008	0.082	0.662	2.485	0.051	1.745	0.150
%RSD		12.140	20.850	1.480	7.185	33.410	2.500	1.957	11.060
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:01:18	0.892	3.754	3.894	14.440	-1.979	-1.464	0.000	8.423
2	22:01:45	0.930	3.687	3.989	15.660	-0.606	-0.390	0.000	8.432
3	22:02:11	0.792	4.379	4.276	14.740	-0.576	-1.391	0.000	8.356
X		0.871	3.940	4.053	14.950	-1.054	-1.082	0.000	8.403
σ		0.071	0.382	0.199	0.633	0.802	0.600	0.000	0.042
%RSD		8.195	9.687	4.907	4.237	76.110	55.490	0.000	0.495
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:01:18	67.916%	2.152	2.068	68.231%	0.014	0.019	0.016	-2.362
2	22:01:45	70.328%	2.381	2.445	69.867%	0.003	-0.016	0.039	-2.348
3	22:02:11	71.574%	2.962	2.378	71.122%	0.005	0.024	0.046	-2.376
X		69.939%	2.498	2.297	69.740%	0.007	0.009	0.034	-2.362
σ		1.860%	0.418	0.202	1.450%	0.006	0.022	0.016	0.014
%RSD		2.659	16.710	8.771	2.079	83.070	237.500	45.820	0.577
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:01:18	68.286%	0.102	2.750	2.653	1.225	1.234	75.940%	76.751%
2	22:01:45	70.402%	0.108	2.864	2.710	1.155	1.374	77.181%	79.071%
3	22:02:11	70.244%	0.106	2.928	3.062	1.186	1.199	79.845%	80.130%
X		69.644%	0.105	2.847	2.808	1.189	1.269	77.655%	78.651%
σ		1.179%	0.003	0.090	0.222	0.035	0.092	1.995%	1.728%
%RSD		1.693	3.267	3.161	7.889	2.952	7.284	2.569	2.197
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:01:18	0.020	0.029	0.022	0.014	0.020	73.755%		
2	22:01:45	0.024	0.027	0.026	-0.001	0.014	76.014%		
3	22:02:11	0.030	0.024	0.035	0.012	0.019	75.735%		
X		0.025	0.027	0.028	0.008	0.018	75.168%		
σ		0.005	0.002	0.007	0.008	0.003	1.232%		
%RSD		19.790	8.474	24.720	94.000	17.810	1.639		

CCV 1467888 1/29/2015 10:05:09 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:36	68.377%	98.830	106.100	101.900	0.000	49280.000	47580.000	47240.000
2	22:06:01	74.079%	101.500	86.780	99.350	0.000	48260.000	46970.000	47230.000
3	22:06:28	73.909%	97.290	102.300	102.100	0.000	49020.000	47440.000	47780.000
X		72.122%	99.221%	98.401%	101.110%	0.000	97.708%	94.661%	94.834%
σ		3.244%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		4.498	2.165	10.400	1.514	0.000	1.082	0.675	0.669
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:36	458.000	5282.000	0.000	51470.000	48330.000	47760.000	66.395%	100.700
2	22:06:01	456.100	5368.000	0.000	52180.000	50940.000	50230.000	67.357%	105.000
3	22:06:28	464.400	5435.000	0.000	52450.000	51470.000	49730.000	69.582%	101.900
X		91.901%	107.227%	0.000	104.069%	100.495%	98.479%	67.778%	102.526%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.635%	n/a
%RSD		0.945	1.429	0.000	0.976	3.354	2.658	2.412	2.209
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:36	94.060	92.630	453.000	24850.000	22710.000	96.590	97.380	97.850
2	22:06:01	96.150	97.100	469.500	25500.000	23510.000	97.910	99.360	98.290
3	22:06:28	94.560	95.970	469.100	25690.000	23710.000	98.250	98.630	100.300
X		94.923%	95.235%	92.769%	101.392%	93.249%	97.580%	98.456%	98.830%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.147	2.438	2.031	1.732	2.282	0.899	1.015	1.347
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:36	93.760	101.400	97.910	97.050	99.760	97.630	0.000	94.940
2	22:06:01	98.790	102.700	101.500	101.700	107.800	97.200	0.000	99.090
3	22:06:28	96.920	104.300	100.400	99.700	94.820	98.250	0.000	96.610
X		96.488%	102.788%	99.954%	99.466%	100.787%	97.693%	0.000	96.880%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.636	1.437	1.853	2.324	6.492	0.538	0.000	2.159
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:36	67.338%	95.720	92.150	67.415%	101.500	101.300	100.200	97.350
2	22:06:01	69.458%	98.770	98.250	69.465%	101.100	100.200	102.600	99.030
3	22:06:28	72.267%	99.540	100.800	71.629%	102.000	101.000	102.600	99.440
X		69.688%	98.010%	97.052%	69.503%	101.530%	100.864%	101.821%	98.605%
σ		2.473%	n/a	n/a	2.107%	n/a	n/a	n/a	n/a
%RSD		3.548	2.062	4.561	3.032	0.464	0.588	1.376	1.123
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:05:36	67.487%	98.200	98.420	98.830	94.880	98.840	75.702%	77.257%
2	22:06:01	69.608%	99.910	100.000	100.300	98.590	99.030	78.665%	79.336%
3	22:06:28	72.200%	102.400	101.000	101.800	99.260	99.790	80.985%	80.352%
X		69.765%	100.154%	99.818%	100.338%	97.577%	99.222%	78.450%	78.982%
σ		2.360%	n/a	n/a	n/a	n/a	n/a	2.648%	1.578%
%RSD		3.383	2.084	1.314	1.497	2.414	0.503	3.375	1.998
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:05:36	95.390	92.240	94.150	93.850	93.970	81.816%		
2	22:06:01	96.330	93.530	97.670	96.430	97.060	83.409%		
3	22:06:28	102.000	96.970	101.400	99.400	100.900	82.776%		
X		97.899%	94.247%	97.732%	96.559%	97.321%	82.667%		
σ		n/a	n/a	n/a	n/a	n/a	0.802%		
%RSD		3.638	2.592	3.703	2.878	3.581	0.970		



CCB8 1/29/2015 10:09:26 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:09:53	74.169%	0.088	1.430	1.754	0.000	125.100	7.315	8.757
2	22:10:20	76.992%	0.107	2.371	1.503	0.000	119.400	5.258	8.199
3	22:10:46	75.577%	0.086	1.392	1.604	0.000	114.500	6.453	7.476
X		75.579%	0.093	1.731	1.620	0.000	119.700	6.342	8.144
σ		1.412%	0.012	0.554	0.126	0.000	5.320	1.033	0.642
%RSD		1.868	12.440	32.030	7.786	0.000	4.446	16.290	7.888
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:09:53	1.249	65.890	0.000	-21.280	35.330	34.390	66.937%	-0.016
2	22:10:20	1.205	72.510	0.000	-33.250	33.950	34.300	68.664%	-0.011
3	22:10:46	1.138	82.560	0.000	-29.560	47.420	34.350	69.040%	-0.187
X		1.198	73.650	0.000	-28.030	38.900	34.340	68.214%	-0.071
σ		0.056	8.397	0.000	6.129	7.412	0.048	1.122%	0.100
%RSD		4.651	11.400	0.000	21.870	19.050	0.141	1.644	140.700
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:09:53	0.033	-0.045	0.222	24.530	26.550	0.020	0.035	0.220
2	22:10:20	0.024	0.018	0.218	18.750	17.740	0.001	-0.120	0.224
3	22:10:46	-0.020	0.005	0.149	11.390	14.470	0.017	0.021	0.176
X		0.012	-0.007	0.196	18.220	19.590	0.013	-0.021	0.207
σ		0.028	0.033	0.041	6.582	6.249	0.010	0.086	0.027
%RSD		225.800	461.000	21.060	36.110	31.910	78.610	400.700	12.890
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:09:53	0.159	0.474	0.368	-0.171	0.177	-1.617	0.000	0.095
2	22:10:20	0.247	0.469	0.285	0.082	1.092	0.309	0.000	0.071
3	22:10:46	0.150	0.404	0.477	-0.325	-0.906	-2.457	0.000	0.072
X		0.185	0.449	0.377	-0.138	0.121	-1.255	0.000	0.079
σ		0.054	0.039	0.096	0.206	1.000	1.418	0.000	0.014
%RSD		29.050	8.638	25.490	149.100	825.500	113.000	0.000	17.570
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:09:53	70.309%	1.076	1.085	73.530%	0.003	0.004	0.000	-2.290
2	22:10:20	72.146%	0.895	0.787	74.552%	-0.007	-0.021	0.000	-2.328
3	22:10:46	72.920%	0.627	0.618	74.594%	-0.007	-0.006	0.037	-2.284
X		71.792%	0.866	0.830	74.225%	-0.004	-0.008	0.012	-2.301
σ		1.341%	0.226	0.237	0.603%	0.006	0.013	0.021	0.024
%RSD		1.868	26.120	28.490	0.812	154.100	161.100	171.300	1.046
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:09:53	71.603%	0.798	0.579	0.613	0.181	0.109	78.036%	78.940%
2	22:10:20	74.143%	0.611	0.575	0.522	0.130	0.136	79.024%	80.252%
3	22:10:46	73.039%	0.725	0.533	0.566	0.085	0.097	80.334%	80.240%
X		72.928%	0.711	0.562	0.567	0.132	0.114	79.131%	79.811%
σ		1.274%	0.094	0.026	0.046	0.048	0.020	1.153%	0.754%
%RSD		1.747	13.260	4.535	8.063	36.560	17.390	1.457	0.945
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	22:09:53	0.025	0.028	0.037	0.034	0.031	82.915%		
2	22:10:20	0.019	0.021	0.026	0.033	0.027	84.651%		
3	22:10:46	0.021	0.024	0.032	0.015	0.025	83.532%		
X		0.022	0.025	0.032	0.027	0.028	83.700%		
σ		0.003	0.004	0.005	0.011	0.003	0.880%		
%RSD		16.030	14.550	15.920	39.030	12.110	1.051		

## Performance Report

### Sample details

Sample name : ITUNE

Acquired at : 1/29/2015 11:04:59 AM

Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

### Mass Calibration verification

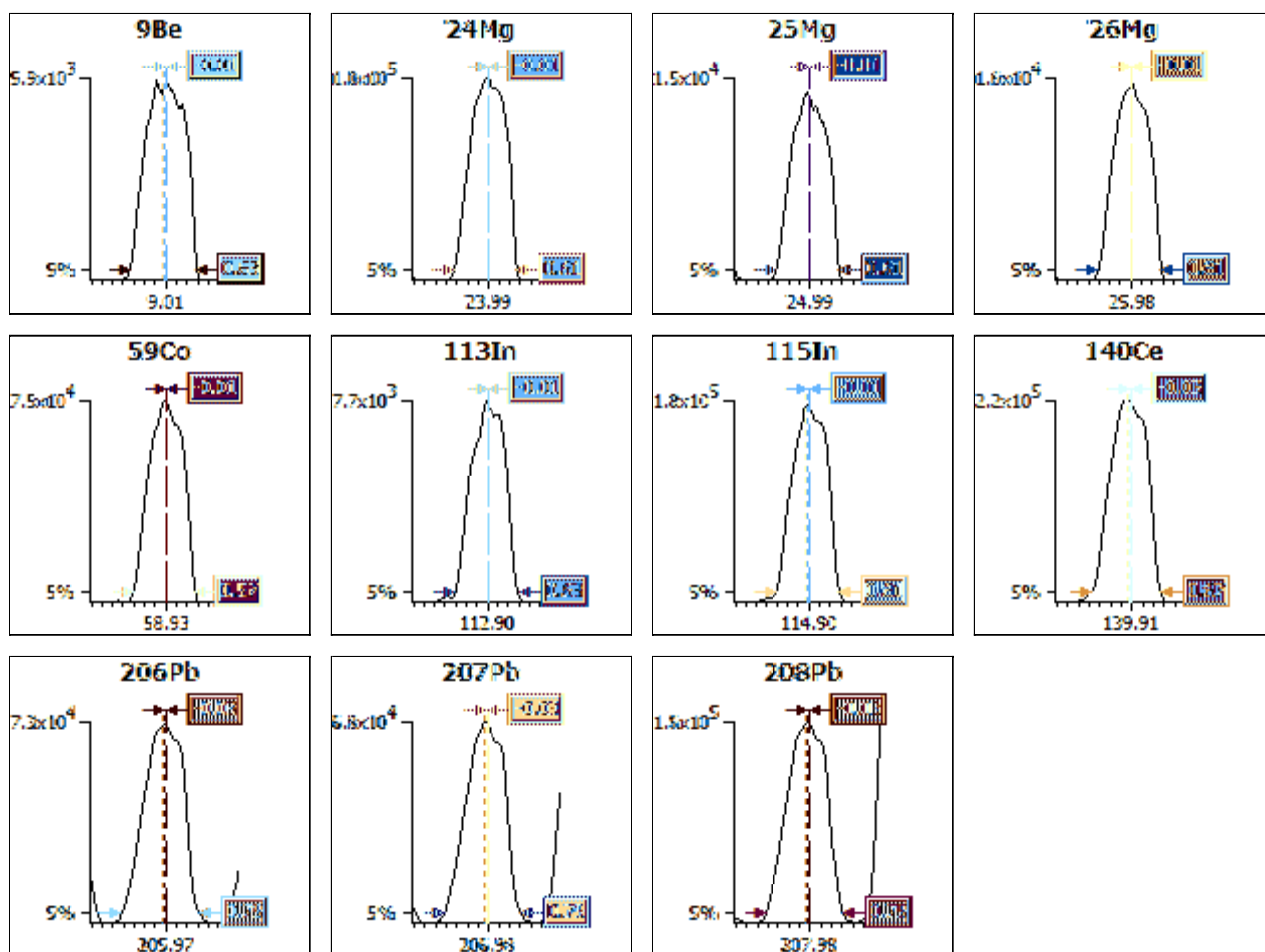
#### Acquisition parameters

Sweeps : 50

Dwell : 1.0 mSecs

Point spacing : 0.02 amu

Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
<b>9Be</b>	0.90	0.40	0.10	0.63	-0.01
<b>24Mg</b>	0.90	0.40	0.10	0.61	-0.01
<b>25Mg</b>	0.90	0.40	0.10	0.61	-0.01
<b>26Mg</b>	0.90	0.40	0.10	0.61	-0.01
<b>59Co</b>	0.90	0.40	0.10	0.57	-0.01
<b>113In</b>	0.90	0.40	0.10	0.63	-0.01
<b>115In</b>	0.90	0.40	0.10	0.61	-0.01
<b>140Ce</b>	0.90	0.40	0.10	0.67	-0.03
<b>206Pb</b>	0.90	0.40	0.10	0.75	-0.03
<b>207Pb</b>	0.90	0.40	0.10	0.75	-0.03
<b>208Pb</b>	0.90	0.40	0.10	0.75	-0.03

**Sample details**

Sample name : ITUNE

Acquired at : 1/29/2015 11:04:59 AM

Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

**Tune conditions**

Major		Minor		Global		Add. Gases	
Extraction	-200	Lens 2	-47.8	Standard resolution	n/a	CCT1	0.00
Lens 1	4.7	Lens 3	-170.2	High resolution	n/a	CCT2	0.00
Focus	20.8	Forward power	1404	Analogue Detector	n/a		
D1	-29.0	Horizontal	31	PC Detector	n/a		
Pole Bias	-0.0	Vertical	435				
Hexapole Bias	-3.4	D2	-121				
Nebuliser	0.84	DA	-80.0				
Sampling Depth	200	Cool	14.0				
		Auxiliary	0.80				

**Sensitivity and stability results****Acquisition parameters**

Sweeps : 180

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	59Co	113In	115In
<b>Dwell (mSecs)</b>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Limits</b>	<b>%RSD</b>	-	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	<b>Countrate</b>	-	>100	>500	>150	>150	>500	>500	>10000
1	11:05:46 AM	1	5694	102349	13032	14711	75679	7771	180115
2	11:06:58 AM	0	5553	100014	12867	14692	75631	7773	180998
3	11:08:10 AM	1	5624	99917	12601	14562	75340	7683	179478
4	11:09:23 AM	1	5529	98894	12752	14699	76097	7766	181090
5	11:10:34 AM	1	5733	98530	12715	14447	76674	7870	182831
x		1	5627	99941	12793	14622	75884	7773	180903
σ		0.24	87.83	1490.83	163.78	114.84	517.73	66.40	1266.29
<b>%RSD</b>		38.034	1.561	1.492	1.280	0.785	0.682	0.854	0.700

Run	Time	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
<b>Dwell (mSecs)</b>		0.0	0.0	0.0	0.0	0.0	0.0
<b>Limits</b>	<b>%RSD</b>	5.0%	-	5.0%	5.0%	5.0%	-
	<b>Countrate</b>	>10000	-	>1000	>1000	>5000	-
1	11:05:46 AM	217975	3299	74330	69385	162069	0
2	11:06:58 AM	220626	3379	74388	69464	159842	0
3	11:08:10 AM	219271	3356	75591	70421	162501	0
4	11:09:23 AM	221723	3364	75790	70272	164255	0
5	11:10:34 AM	224230	3390	76639	71348	166935	0
x		220765	3358	75348	70178	163120	0
σ		2395.65	35.00	984.65	802.65	2649.29	0.15
<b>%RSD</b>		1.085	1.042	1.307	1.144	1.624	63.888

**Ratio results**

Run	Time	156Ce O/140Ce	
<b>Ratio limits</b>			<0.0600
1	11:05:46 AM	0	
2	11:06:58 AM	0	
3	11:08:10 AM	0	
4	11:09:23 AM	0	
5	11:10:34 AM	0	
x		0.0152	
σ		0.00	
<b>%RSD</b>		0.6153	

Result : The performance report passed.

## Dilution Corrected Concentrations

STD1 1456094 1/30/2015 10:51:32 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:58	96.114%	-0.014	0.004	-0.067	0.000	0.847	-0.039	-0.069
2	10:52:25	101.768%	-0.032	-0.034	0.095	0.000	0.088	0.457	-0.096
3	10:52:52	102.118%	0.047	0.031	-0.028	0.000	-0.934	-0.418	0.166
X		100.000%	-0.000	0.000	0.000	0.000	0.000	-0.000	0.000
σ		3.370%	0.041	0.033	0.085	0.000	0.894	0.439	0.144
%RSD		3.370	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:58	-0.256	-0.171	0.000	5.516	-1.917	0.267	97.886%	-0.190
2	10:52:25	-0.023	0.033	0.000	1.097	2.967	0.689	100.974%	0.028
3	10:52:52	0.280	0.138	0.000	-6.614	-1.050	-0.955	101.141%	0.161
X		-0.000	-0.000	0.000	-0.000	-0.000	0.000	100.000%	-0.000
σ		0.269	0.157	0.000	6.139	2.606	0.854	1.833%	0.177
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	1.833	0.000
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:58	0.025	-0.016	0.002	0.231	-0.594	0.003	0.019	-0.019
2	10:52:25	-0.063	0.011	-0.008	-1.027	0.002	-0.008	0.015	-0.010
3	10:52:52	0.038	0.004	0.006	0.797	0.592	0.004	-0.034	0.029
X		-0.000	0.000	0.000	-0.000	-0.000	-0.000	0.000	0.000
σ		0.055	0.014	0.007	0.934	0.593	0.007	0.029	0.025
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:58	0.023	-0.012	0.003	-0.100	0.726	-0.976	0.000	0.001
2	10:52:25	-0.071	0.026	-0.005	0.028	0.222	0.473	0.000	-0.000
3	10:52:52	0.048	-0.014	0.003	0.072	-0.948	0.503	0.000	-0.000
X		0.000	-0.000	0.000	0.000	-0.000	-0.000	0.000	-0.000
σ		0.063	0.022	0.005	0.089	0.858	0.845	0.000	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:58	98.062%	-0.000	0.002	99.843%	0.005	0.003	0.000	-0.010
2	10:52:25	100.442%	0.005	-0.008	100.156%	-0.006	-0.005	-0.000	0.006
3	10:52:52	101.496%	-0.005	0.006	100.002%	0.001	0.001	-0.000	0.004
X		100.000%	-0.000	-0.000	100.000%	-0.000	0.000	-0.000	-0.000
σ		1.760%	0.005	0.008	0.157%	0.005	0.004	0.000	0.008
%RSD		1.760	0.000	0.000	0.157	0.000	0.000	0.000	0.000
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:58	97.878%	-0.301	-0.045	-0.039	-0.036	0.001	97.680%	98.202%
2	10:52:25	100.704%	0.014	0.001	0.003	0.016	-0.007	101.505%	100.875%
3	10:52:52	101.417%	0.286	0.044	0.036	0.020	0.006	100.816%	100.923%
X		100.000%	0.000	-0.000	0.000	-0.000	0.000	100.000%	100.000%
σ		1.872%	0.294	0.045	0.037	0.031	0.007	2.039%	1.557%
%RSD		1.872	0.000	0.000	0.000	0.000	0.000	2.039	1.557
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:51:58	0.000	-0.001	0.001	-0.003	-0.002	99.611%		
2	10:52:25	0.000	0.001	-0.004	-0.001	-0.000	100.339%		
3	10:52:52	-0.001	-0.000	0.002	0.004	0.003	100.050%		
X		0.000	0.000	-0.000	0.000	0.000	100.000%		
σ		0.000	0.001	0.003	0.004	0.003	0.366%		
%RSD		0.000	0.000	0.000	0.000	0.000	0.366		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:12	72.559%	197.000	0.605	0.312	0.000	99370.000	99650.000	99450.000
2	10:55:39	72.511%	201.400	0.039	0.755	0.000	99460.000	99170.000	99260.000
3	10:56:05	70.892%	201.600	1.114	0.803	0.000	101200.000	101200.000	101300.000
X		71.988%	200.000	0.586	0.623	0.000	100000.000	100000.000	100000.000
σ		0.949%	2.622	0.537	0.271	0.000	1020.000	1053.000	1117.000
%RSD		1.318	1.311	91.730	43.450	0.000	1.020	1.053	1.117
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:12	992.600	16.600	0.000	100000.000	100200.000	99830.000	80.805%	0.199
2	10:55:39	992.100	18.590	0.000	99620.000	99390.000	99130.000	81.782%	0.340
3	10:56:05	1015.000	19.150	0.000	100300.000	100400.000	101000.000	80.589%	0.033
X		1000.000	18.110	0.000	100000.000	100000.000	100000.000	81.059%	0.190
σ		13.280	1.339	0.000	367.400	532.100	964.100	0.636%	0.154
%RSD		1.328	7.391	0.000	0.367	0.532	0.964	0.784	80.770
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:12	197.800	198.400	989.200	49600.000	49690.000	197.900	198.200	198.500
2	10:55:39	199.600	200.000	996.000	49830.000	49820.000	199.400	200.800	198.000
3	10:56:05	202.600	201.700	1015.000	50570.000	50490.000	202.700	201.000	203.500
X		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		2.437	1.647	13.230	508.800	428.700	2.488	1.564	3.005
%RSD		1.218	0.823	1.323	1.018	0.857	1.244	0.782	1.502
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:12	198.600	201.000	199.700	197.700	199.900	195.800	0.000	198.800
2	10:55:39	199.500	200.000	199.500	201.300	203.900	202.900	0.000	200.300
3	10:56:05	201.900	199.100	200.800	201.000	196.100	201.300	0.000	200.900
X		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		1.734	0.971	0.685	1.995	3.894	3.728	0.000	1.096
%RSD		0.867	0.486	0.343	0.998	1.947	1.864	0.000	0.548
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:12	81.964%	0.232	0.266	78.888%	199.600	199.700	199.200	200.200
2	10:55:39	82.170%	0.264	0.226	79.737%	200.000	200.200	200.200	201.300
3	10:56:05	82.024%	0.216	0.202	79.214%	200.400	200.100	200.600	198.500
X		82.053%	0.237	0.231	79.280%	200.000	200.000	200.000	200.000
σ		0.106%	0.025	0.032	0.428%	0.388	0.271	0.742	1.433
%RSD		0.129	10.440	14.050	0.540	0.194	0.136	0.371	0.716
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:12	80.211%	0.163	0.216	0.261	199.400	198.400	82.755%	82.703%
2	10:55:39	80.736%	0.363	0.279	0.232	199.300	200.100	83.942%	83.658%
3	10:56:05	80.595%	0.509	0.211	0.280	201.300	201.400	83.638%	83.274%
X		80.514%	0.345	0.235	0.258	200.000	200.000	83.445%	83.212%
σ		0.272%	0.174	0.038	0.024	1.113	1.484	0.616%	0.481%
%RSD		0.338	50.310	16.090	9.476	0.556	0.742	0.739	0.577
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:55:12	193.100	193.600	193.600	193.400	193.600	87.555%		
2	10:55:39	202.300	202.200	201.400	200.500	200.700	84.977%		
3	10:56:05	204.600	204.200	205.000	206.100	205.700	83.148%		
X		200.000	200.000	200.000	200.000	200.000	85.227%		
σ		6.058	5.658	5.842	6.330	6.104	2.214%		
%RSD		3.029	2.829	2.921	3.165	3.052	2.598		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:24	74.816%	0.218	199.500	198.200	0.000	151.100	101.000	99.290
2	10:59:51	77.303%	0.163	192.200	201.500	0.000	152.000	96.820	98.550
3	11:00:18	79.502%	0.285	208.300	200.300	0.000	149.900	96.550	95.000
X		77.207%	0.222	200.000	200.000	0.000	151.000	98.140	97.610
σ		2.345%	0.061	8.051	1.654	0.000	1.074	2.516	2.292
%RSD		3.037	27.560	4.026	0.827	0.000	0.711	2.564	2.349
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:24	9.426	9991.000	0.000	133.000	160.300	216.800	82.155%	196.500
2	10:59:51	8.157	10060.000	0.000	132.300	147.100	215.100	84.644%	203.200
3	11:00:18	7.357	9947.000	0.000	112.900	108.300	206.100	86.040%	200.300
X		8.313	10000.000	0.000	126.100	138.500	212.700	84.280%	200.000
σ		1.043	57.940	0.000	11.430	27.040	5.734	1.968%	3.366
%RSD		12.550	0.579	0.000	9.068	19.510	2.696	2.335	1.683
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:24	0.239	0.284	1.416	92.940	98.670	0.213	0.648	0.804
2	10:59:51	0.330	0.311	1.452	90.500	83.630	0.197	0.497	0.646
3	11:00:18	0.286	0.341	1.470	85.040	75.440	0.244	0.510	0.628
X		0.285	0.312	1.446	89.490	85.910	0.218	0.552	0.693
σ		0.046	0.028	0.027	4.045	11.780	0.024	0.083	0.097
%RSD		16.020	9.094	1.881	4.520	13.720	10.970	15.120	14.020
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:24	0.661	1.485	1.500	0.684	0.506	2.833	0.000	0.318
2	10:59:51	0.602	1.523	1.454	0.419	2.636	1.340	0.000	0.367
3	11:00:18	0.716	1.533	1.574	0.412	0.619	0.693	0.000	0.345
X		0.660	1.514	1.509	0.505	1.254	1.622	0.000	0.343
σ		0.057	0.026	0.061	0.156	1.198	1.097	0.000	0.025
%RSD		8.630	1.687	4.011	30.790	95.570	67.660	0.000	7.218
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:24	82.634%	196.100	193.700	84.458%	0.181	0.208	0.508	-0.166
2	10:59:51	85.642%	199.500	200.900	85.286%	0.221	0.221	0.453	-0.403
3	11:00:18	86.384%	204.400	205.400	87.309%	0.186	0.208	0.480	-0.288
X		84.887%	200.000	200.000	85.684%	0.196	0.213	0.480	-0.285
σ		1.986%	4.192	5.892	1.467%	0.022	0.008	0.028	0.119
%RSD		2.339	2.096	2.946	1.712	11.000	3.565	5.782	41.550
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:24	83.665%	197.900	198.200	196.800	0.345	0.620	84.297%	84.043%
2	10:59:51	86.771%	201.000	200.800	201.500	0.246	0.669	87.619%	87.320%
3	11:00:18	88.346%	201.100	201.000	201.600	0.409	0.646	87.307%	87.171%
X		86.261%	200.000	200.000	200.000	0.333	0.645	86.408%	86.178%
σ		2.382%	1.849	1.532	2.755	0.082	0.025	1.834%	1.851%
%RSD		2.761	0.924	0.766	1.377	24.550	3.800	2.123	2.148
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:59:24	0.208	0.209	0.360	0.340	0.333	82.002%		
2	10:59:51	0.204	0.200	0.335	0.357	0.327	84.774%		
3	11:00:18	0.224	0.208	0.392	0.319	0.344	85.898%		
X		0.212	0.205	0.362	0.338	0.335	84.225%		
σ		0.010	0.005	0.029	0.019	0.009	2.005%		
%RSD		4.914	2.250	7.939	5.577	2.544	2.381		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:40	68.505%	79.830	89.460	86.810	0.000	40800.000	39610.000	39840.000
2	11:04:06	73.078%	79.670	84.490	86.280	0.000	39900.000	39050.000	39170.000
3	11:04:33	71.977%	83.510	86.640	88.760	0.000	40690.000	39620.000	39720.000
X		71.186%	101.255%	108.579%	109.104%	0.000	101.158%	98.572%	98.945%
σ		2.387%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.353	2.680	2.872	1.496	0.000	1.215	0.826	0.908
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:40	393.500	5637.000	0.000	40450.000	38620.000	38210.000	80.657%	80.890
2	11:04:06	392.000	6011.000	0.000	40580.000	40040.000	39390.000	82.763%	82.350
3	11:04:33	396.800	6331.000	0.000	40580.000	39450.000	39540.000	83.593%	82.630
X		98.529%	149.827%	0.000	101.340%	98.420%	97.617%	82.338%	102.444%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.514%	n/a
%RSD		0.623	5.795	0.000	0.188	1.805	1.858	1.838	1.141
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:40	76.770	77.620	385.400	19490.000	19660.000	77.550	77.650	79.090
2	11:04:06	78.320	80.060	392.900	19760.000	19940.000	78.570	79.690	79.060
3	11:04:33	78.170	79.560	392.200	19740.000	20190.000	79.470	79.370	79.740
X		97.186%	98.853%	97.536%	98.318%	99.632%	98.162%	98.630%	99.125%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.100	1.626	1.058	0.778	1.333	1.220	1.390	0.485
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:40	79.540	80.640	79.690	78.550	80.510	79.450	0.000	77.240
2	11:04:06	79.510	79.870	81.790	79.830	81.290	79.520	0.000	78.170
3	11:04:33	80.020	80.670	81.830	80.000	82.200	81.080	0.000	77.330
X		99.616%	100.493%	101.375%	99.325%	101.664%	100.017%	0.000	96.976%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.361	0.570	1.511	1.002	1.044	1.151	0.000	0.661
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:40	81.469%	80.740	80.250	80.764%	78.470	78.170	78.520	78.100
2	11:04:06	84.196%	83.020	83.860	82.364%	79.540	78.970	79.360	79.860
3	11:04:33	85.222%	83.860	84.790	81.800%	79.760	79.410	78.810	78.700
X		83.629%	103.177%	103.713%	81.643%	99.073%	98.562%	98.622%	98.612%
σ		1.940%	n/a	n/a	0.812%	n/a	n/a	n/a	n/a
%RSD		2.319	1.962	2.889	0.994	0.872	0.799	0.537	1.133
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:40	80.923%	79.550	80.010	80.830	78.490	77.650	83.893%	83.665%
2	11:04:06	82.769%	82.070	80.210	81.530	80.030	80.160	85.727%	85.508%
3	11:04:33	85.297%	80.560	79.210	80.040	77.440	78.610	85.800%	85.942%
X		82.996%	100.907%	99.763%	101.002%	98.318%	98.509%	85.140%	85.038%
σ		2.196%	n/a	n/a	n/a	n/a	n/a	1.081%	1.209%
%RSD		2.646	1.571	0.660	0.928	1.654	1.608	1.269	1.422
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:03:40	83.460	81.970	82.130	79.530	80.280	83.136%		
2	11:04:06	85.490	83.550	85.600	81.590	83.160	83.274%		
3	11:04:33	85.950	84.050	85.600	82.020	83.480	83.543%		
X		106.213%	103.989%	105.553%	101.307%	102.888%	83.318%		
σ		n/a	n/a	n/a	n/a	n/a	0.207%		
%RSD		1.560	1.307	2.369	1.640	2.143	0.249		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:58	78.089%	0.057	1.216	1.421	0.000	74.370	107.100	100.800
2	11:08:24	81.804%	0.147	0.629	0.963	0.000	75.020	108.000	103.600
3	11:08:51	82.506%	0.102	1.113	1.097	0.000	75.150	107.500	110.000
X		80.800%	0.102	0.986	1.160	0.000	74.850	107.600	104.800
σ		2.373%	0.045	0.314	0.236	0.000	0.416	0.485	4.720
%RSD		2.937	44.180	31.800	20.310	0.000	0.556	0.451	4.503
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:58	3.035	3839.000	0.000	178.000	126.200	143.900	84.675%	0.471
2	11:08:24	3.624	3831.000	0.000	179.600	107.000	142.900	86.810%	0.180
3	11:08:51	3.789	3823.000	0.000	171.800	120.800	143.000	89.034%	0.132
X		3.483	3831.000	0.000	176.500	118.000	143.300	86.840%	0.261
σ		0.396	7.762	0.000	4.098	9.884	0.548	2.180%	0.183
%RSD		11.380	0.203	0.000	2.322	8.376	0.382	2.510	70.170
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:58	0.185	0.061	0.466	30.100	37.120	0.096	0.062	0.567
2	11:08:24	0.124	0.149	0.484	31.450	29.430	0.091	0.015	0.655
3	11:08:51	0.070	0.113	0.523	33.490	26.240	0.106	0.088	0.759
X		0.126	0.108	0.491	31.680	30.930	0.098	0.055	0.660
σ		0.058	0.044	0.029	1.704	5.595	0.008	0.037	0.096
%RSD		45.610	40.910	5.963	5.377	18.090	7.995	67.700	14.590
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:58	0.487	1.276	1.485	0.249	1.002	1.670	0.000	0.147
2	11:08:24	0.571	1.466	1.560	0.047	1.428	-0.141	0.000	0.156
3	11:08:51	0.641	1.343	1.605	0.172	0.683	1.360	0.000	0.162
X		0.567	1.361	1.550	0.156	1.038	0.963	0.000	0.155
σ		0.077	0.096	0.061	0.102	0.374	0.969	0.000	0.008
%RSD		13.600	7.070	3.909	65.300	35.990	100.600	0.000	4.882
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:58	84.725%	0.655	0.592	83.890%	0.030	0.065	0.053	0.125
2	11:08:24	88.108%	0.599	0.582	87.047%	0.062	0.057	0.047	0.077
3	11:08:51	90.539%	0.597	0.584	88.822%	0.055	0.096	0.073	0.076
X		87.790%	0.617	0.586	86.586%	0.049	0.072	0.058	0.093
σ		2.920%	0.033	0.005	2.498%	0.017	0.020	0.014	0.028
%RSD		3.326	5.383	0.926	2.885	34.050	28.250	23.490	30.350
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:58	86.187%	-0.653	-0.135	-0.142	0.122	0.123	84.947%	84.314%
2	11:08:24	88.256%	-0.555	-0.084	-0.105	0.094	0.175	88.338%	87.587%
3	11:08:51	89.179%	-0.276	-0.115	-0.092	0.070	0.157	90.056%	89.276%
X		87.874%	-0.495	-0.111	-0.113	0.096	0.152	87.780%	87.059%
σ		1.532%	0.195	0.025	0.026	0.026	0.026	2.600%	2.523%
%RSD		1.744	39.480	22.800	23.150	27.150	17.310	2.961	2.898
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:07:58	0.089	0.076	0.115	0.144	0.124	80.597%		
2	11:08:24	0.090	0.082	0.145	0.143	0.146	82.940%		
3	11:08:51	0.096	0.075	0.164	0.141	0.148	84.335%		
X		0.092	0.077	0.141	0.142	0.139	82.624%		
σ		0.004	0.004	0.025	0.001	0.013	1.889%		
%RSD		3.876	4.872	17.540	0.851	9.354	2.286		



ICB 1/30/2015 11:11:48 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:14	79.365%	-0.033	-0.023	0.460	0.000	24.710	2.252	2.287
2	11:12:41	81.573%	-0.078	0.125	0.019	0.000	20.250	0.584	2.627
3	11:13:08	83.718%	0.071	0.104	0.374	0.000	18.010	1.157	1.553
X		81.552%	-0.013	0.069	0.285	0.000	20.990	1.331	2.156
σ		2.177%	0.077	0.080	0.234	0.000	3.411	0.848	0.549
%RSD		2.669	571.700	116.700	82.170	0.000	16.250	63.680	25.480
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:14	-2.058	20.370	0.000	30.950	6.313	5.931	86.001%	-0.444
2	11:12:41	-2.427	22.030	0.000	19.200	-3.642	7.529	89.931%	-0.342
3	11:13:08	-2.387	21.720	0.000	22.550	-0.886	7.992	91.395%	-0.330
X		-2.291	21.370	0.000	24.230	0.595	7.151	89.109%	-0.372
σ		0.203	0.879	0.000	6.054	5.140	1.082	2.790%	0.063
%RSD		8.856	4.112	0.000	24.980	863.600	15.130	3.130	16.860
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:14	-0.104	0.024	0.006	1.876	0.507	0.002	0.021	0.056
2	11:12:41	0.028	0.034	0.019	-1.674	-1.007	-0.008	-0.146	0.027
3	11:13:08	0.041	0.038	-0.019	-2.488	-2.251	0.001	0.055	0.008
X		-0.012	0.032	0.002	-0.762	-0.917	-0.002	-0.024	0.031
σ		0.080	0.007	0.020	2.320	1.381	0.006	0.107	0.024
%RSD		691.900	23.100	970.300	304.500	150.600	394.700	453.200	79.810
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:14	0.024	0.078	0.134	0.172	-0.223	1.830	0.000	0.003
2	11:12:41	0.019	0.008	0.070	0.506	1.128	2.953	0.000	0.001
3	11:13:08	-0.029	0.035	0.076	0.401	1.310	2.095	0.000	0.008
X		0.005	0.040	0.094	0.359	0.738	2.293	0.000	0.004
σ		0.030	0.035	0.035	0.171	0.837	0.587	0.000	0.004
%RSD		619.300	88.310	37.780	47.590	113.400	25.610	0.000	95.890
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:14	86.512%	0.115	0.082	88.575%	-0.001	-0.016	0.011	-0.005
2	11:12:41	90.767%	0.080	0.069	90.349%	-0.027	-0.002	-0.003	-0.009
3	11:13:08	93.069%	0.097	0.064	91.713%	-0.014	-0.007	0.001	-0.016
X		90.116%	0.097	0.072	90.212%	-0.014	-0.008	0.003	-0.010
σ		3.327%	0.017	0.009	1.573%	0.013	0.007	0.007	0.005
%RSD		3.692	17.820	13.210	1.744	96.050	85.380	247.200	54.020
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:14	87.835%	-1.289	-0.283	-0.304	-0.059	0.000	87.347%	86.491%
2	11:12:41	90.179%	-1.262	-0.263	-0.286	-0.049	-0.006	90.605%	89.636%
3	11:13:08	92.089%	-1.155	-0.275	-0.254	-0.060	-0.003	91.119%	91.319%
X		90.034%	-1.236	-0.274	-0.282	-0.056	-0.003	89.690%	89.149%
σ		2.131%	0.071	0.010	0.025	0.006	0.003	2.045%	2.451%
%RSD		2.367	5.724	3.722	8.982	10.980	111.200	2.281	2.749
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:12:14	0.002	0.003	0.007	-0.002	0.006	87.527%		
2	11:12:41	0.003	0.001	0.012	0.007	0.007	89.517%		
3	11:13:08	0.003	0.003	0.011	0.002	0.003	89.240%		
X		0.003	0.002	0.010	0.002	0.005	88.761%		
σ		0.000	0.001	0.003	0.004	0.002	1.078%		
%RSD		17.290	59.070	31.100	202.800	44.280	1.214		

CRI 1470869 1/30/2015 11:16:06 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:32	85.127%	1.056	5.014	5.245	0.000	115.900	95.180	91.480
2	11:16:59	86.068%	1.026	4.930	5.423	0.000	115.400	92.410	92.510
3	11:17:25	89.328%	0.922	3.744	5.562	0.000	113.800	93.470	92.380
X		86.841%	100.121%	91.262%	108.199%	0.000	143.776%	93.686%	92.122%
σ		2.204%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.538	7.002	15.560	2.938	0.000	0.932	1.492	0.611
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:32	27.110	458.500	0.000	118.500	83.790	103.900	89.429%	4.783
2	11:16:59	28.140	466.400	0.000	116.300	106.400	105.100	94.030%	4.256
3	11:17:25	27.030	459.900	0.000	112.800	104.600	105.000	94.116%	4.779
X		91.420%	92.320%	0.000	115.885%	98.277%	104.686%	92.525%	92.121%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.682%	n/a
%RSD		2.250	0.908	0.000	2.473	12.800	0.624	2.898	6.588
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:32	0.853	1.900	4.758	51.400	50.750	0.438	0.700	2.134
2	11:16:59	0.825	1.922	4.806	48.470	48.460	0.492	0.872	2.155
3	11:17:25	1.043	1.916	4.845	51.610	48.450	0.479	0.950	2.169
X		90.726%	95.628%	96.057%	100.988%	98.439%	93.952%	84.070%	107.633%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		13.080	0.611	0.903	3.469	2.689	5.916	15.210	0.811
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:32	2.205	5.375	4.836	0.887	4.294	5.164	0.000	4.768
2	11:16:59	2.016	5.104	4.879	1.408	5.436	6.530	0.000	4.833
3	11:17:25	2.160	5.137	4.686	0.941	5.562	5.258	0.000	4.734
X		106.348%	104.107%	96.008%	107.866%	101.949%	113.016%	0.000	95.568%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		4.628	2.839	2.113	26.540	13.700	13.500	0.000	1.044
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:32	90.481%	4.734	4.728	90.486%	0.908	0.937	0.872	0.922
2	11:16:59	92.635%	4.699	4.807	92.653%	0.901	0.954	1.054	0.958
3	11:17:25	95.011%	4.998	4.958	93.168%	0.966	0.881	0.983	0.993
X		92.709%	96.210%	96.623%	92.102%	92.498%	92.365%	96.998%	95.797%
σ		2.266%	n/a	n/a	1.423%	n/a	n/a	n/a	n/a
%RSD		2.444	3.402	2.419	1.546	3.903	4.137	9.452	3.707
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:16:32	90.076%	3.624	1.556	1.559	9.480	9.152	89.871%	89.543%
2	11:16:59	92.150%	4.027	1.637	1.553	9.762	9.687	92.079%	91.983%
3	11:17:25	93.392%	4.040	1.625	1.656	9.799	9.398	92.858%	92.685%
X		91.872%	77.940%	80.296%	79.483%	96.804%	94.123%	91.603%	91.404%
σ		1.675%	n/a	n/a	n/a	n/a	n/a	1.550%	1.649%
%RSD		1.823	6.067	2.709	3.646	1.805	2.842	1.692	1.804
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:16:32	1.006	0.940	1.081	0.943	0.985	90.613%		
2	11:16:59	0.991	0.986	1.109	0.978	1.022	91.512%		
3	11:17:25	1.010	0.964	1.088	1.041	1.045	92.240%		
X		100.233%	96.324%	109.271%	98.740%	101.722%	91.455%		
σ		n/a	n/a	n/a	n/a	n/a	0.815%		
%RSD		0.977	2.422	1.294	5.025	2.989	0.891		

ICSA 1462866 1/30/2015 11:20:23 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:50	66.077%	-0.031	0.525	0.850	0.000	102000.000	100200.000	99270.000
2	11:21:16	70.483%	-0.020	0.452	0.446	0.000	99190.000	98030.000	97820.000
3	11:21:43	73.037%	-0.009	0.412	0.920	0.000	96920.000	95540.000	94410.000
X		69.866%	-0.020	0.463	0.739	0.000	99370.000	97910.000	97170.000
σ		3.521%	0.011	0.057	0.256	0.000	2554.000	2312.000	2494.000
%RSD		5.039	54.970	12.390	34.600	0.000	2.570	2.362	2.567
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:50	100800.000	42.260	0.000	99650.000	99320.000	99780.000	75.039%	2122.000
2	11:21:16	99390.000	41.740	0.000	99440.000	101900.000	102000.000	76.544%	2181.000
3	11:21:43	95740.000	40.560	0.000	95750.000	96220.000	98060.000	79.248%	2080.000
X		98650.000	41.520	0.000	98280.000	99150.000	99960.000	76.944%	2128.000
σ		2621.000	0.871	0.000	2195.000	2849.000	1991.000	2.133%	50.400
%RSD		2.657	2.097	0.000	2.234	2.874	1.991	2.772	2.369
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:50	-0.067	0.575	0.712	99540.000	100400.000	0.102	-0.353	1.314
2	11:21:16	-0.105	0.591	0.686	100400.000	101100.000	0.125	-0.453	1.235
3	11:21:43	-0.342	0.507	0.636	96870.000	97810.000	0.127	-0.543	1.153
X		-0.171	0.558	0.677	98940.000	99760.000	0.118	-0.450	1.234
σ		0.149	0.045	0.039	1846.000	1730.000	0.014	0.095	0.081
%RSD		86.890	8.019	5.706	1.866	1.734	11.610	21.160	6.524
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:50	2.099	3.207	1.879	-0.208	0.101	2.022	0.000	0.677
2	11:21:16	2.104	3.245	1.780	0.361	0.605	2.733	0.000	0.622
3	11:21:43	2.109	3.076	1.786	-0.156	0.643	0.900	0.000	0.596
X		2.104	3.176	1.815	-0.001	0.450	1.885	0.000	0.631
σ		0.005	0.089	0.056	0.314	0.302	0.924	0.000	0.041
%RSD		0.232	2.791	3.062	29250.000	67.270	49.020	0.000	6.544
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:50	76.857%	2135.000	2235.000	73.491%	0.125	0.106	2.632	0.221
2	11:21:16	80.126%	2194.000	2322.000	74.487%	0.087	0.109	2.352	0.464
3	11:21:43	82.122%	2145.000	2251.000	76.963%	0.085	0.093	2.470	0.415
X		79.702%	2158.000	2269.000	74.980%	0.099	0.102	2.484	0.367
σ		2.658%	31.570	46.360	1.788%	0.022	0.008	0.141	0.129
%RSD		3.335	1.463	2.043	2.384	22.510	8.121	5.668	35.140
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:50	76.561%	-0.933	-0.247	-0.245	0.054	0.079	81.047%	81.745%
2	11:21:16	76.892%	-0.901	-0.223	-0.240	-0.015	0.130	82.901%	83.226%
3	11:21:43	80.575%	-0.790	-0.229	-0.240	0.105	0.110	86.194%	86.524%
X		78.009%	-0.874	-0.233	-0.242	0.048	0.107	83.381%	83.832%
σ		2.228%	0.075	0.013	0.003	0.060	0.025	2.606%	2.446%
%RSD		2.856	8.582	5.372	1.153	124.600	23.860	3.126	2.918
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:20:50	0.016	0.011	0.273	0.199	0.244	85.938%		
2	11:21:16	0.012	0.006	0.265	0.207	0.234	83.148%		
3	11:21:43	0.006	0.012	0.221	0.200	0.220	87.520%		
X		0.011	0.010	0.253	0.202	0.233	85.535%		
σ		0.005	0.003	0.028	0.004	0.012	2.214%		
%RSD		40.260	30.840	11.130	2.226	5.163	2.588		

ICSAB 1462867

1/30/2015 11:24:41 AM

QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:07	71.822%	18.140	50.760	46.160	0.000	95540.000	93640.000	93710.000
2	11:25:33	73.795%	19.070	48.940	48.600	0.000	96530.000	94770.000	94270.000
3	11:26:00	74.658%	19.540	49.270	49.600	0.000	96450.000	95340.000	94480.000
X		73.425%	94.580%	99.318%	96.237%	0.000	96.175%	94.581%	94.153%
σ		1.454%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.980	3.760	1.956	3.674	0.000	0.575	0.916	0.419
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:07	94440.000	457.300	0.000	95420.000	95490.000	96910.000	79.452%	2035.000
2	11:25:33	95450.000	462.000	0.000	97420.000	97130.000	99180.000	81.299%	2087.000
3	11:26:00	95470.000	461.700	0.000	97320.000	98880.000	100800.000	82.576%	2096.000
X		95.121%	92.071%	0.000	96.718%	97.166%	98.975%	81.109%	103.631%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.571%	n/a
%RSD		0.618	0.567	0.000	1.167	1.745	1.989	1.937	1.588
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:07	17.560	18.830	18.550	96480.000	97280.000	19.010	18.150	20.210
2	11:25:33	18.450	19.410	19.030	98850.000	99380.000	19.290	18.610	20.800
3	11:26:00	18.050	19.360	19.090	98340.000	99700.000	19.190	18.390	21.240
X		90.112%	95.993%	94.450%	97.891%	98.785%	95.805%	91.915%	103.755%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		2.465	1.687	1.549	1.273	1.328	0.735	1.238	2.482
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:07	21.290	22.530	21.280	21.510	53.780	52.560	0.000	20.180
2	11:25:33	21.670	23.400	22.730	21.220	55.570	56.100	0.000	20.520
3	11:26:00	21.460	22.600	22.140	19.190	54.170	53.920	0.000	20.670
X		107.374%	91.366%	88.199%	103.207%	109.014%	108.386%	0.000	102.287%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.893	2.107	3.299	6.119	1.723	3.297	0.000	1.216
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:07	75.345%	2174.000	2254.000	76.343%	18.770	18.570	21.400	19.200
2	11:25:33	77.493%	2251.000	2356.000	78.816%	19.030	18.820	21.630	19.890
3	11:26:00	78.735%	2279.000	2374.000	79.018%	18.840	19.470	21.860	19.650
X		77.191%	111.738%	116.384%	78.059%	94.398%	94.766%	108.159%	97.898%
σ		1.715%	n/a	n/a	1.490%	n/a	n/a	n/a	n/a
%RSD		2.222	2.428	2.778	1.908	0.721	2.443	1.049	1.774
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:07	81.130%	91.580	18.260	18.410	18.290	18.750	86.308%	86.518%
2	11:25:33	83.315%	95.450	18.780	18.970	19.140	18.880	87.547%	88.311%
3	11:26:00	82.480%	97.070	19.150	19.250	19.340	19.100	88.563%	88.672%
X		82.308%	94.703%	93.658%	94.374%	94.616%	94.545%	87.473%	87.834%
σ		1.103%	n/a	n/a	n/a	n/a	n/a	1.129%	1.153%
%RSD		1.340	2.981	2.389	2.264	2.934	0.925	1.291	1.313
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:25:07	18.800	18.370	20.010	19.880	19.790	83.659%		
2	11:25:33	19.900	19.180	20.820	20.780	20.460	84.051%		
3	11:26:00	20.220	19.530	20.700	20.580	20.610	83.281%		
X		98.219%	95.135%	102.552%	102.052%	101.438%	83.663%		
σ		n/a	n/a	n/a	n/a	n/a	0.385%		
%RSD		3.797	3.131	2.148	2.308	2.164	0.461		

CCV 1467888 1/30/2015 11:32:04 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:30	80.653%	98.950	97.240	96.700	0.000	47990.000	46420.000	45900.000
2	11:32:57	81.933%	97.380	97.480	96.200	0.000	48080.000	47190.000	47230.000
3	11:33:24	82.709%	98.720	99.540	98.340	0.000	47850.000	47110.000	47240.000
X		81.765%	98.353%	98.087%	97.080%	0.000	95.946%	93.811%	93.582%
σ		1.038%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.270	0.865	1.288	1.149	0.000	0.236	0.892	1.657
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:30	445.200	4658.000	0.000	47270.000	46950.000	47180.000	89.316%	98.650
2	11:32:57	456.400	4788.000	0.000	48840.000	49240.000	49370.000	89.796%	99.660
3	11:33:24	456.500	4764.000	0.000	48620.000	49690.000	49080.000	90.613%	98.220
X		90.540%	94.727%	0.000	96.487%	97.249%	97.088%	89.908%	98.844%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.656%	n/a
%RSD		1.433	1.458	0.000	1.758	3.026	2.457	0.729	0.745
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:30	92.690	92.310	481.500	23750.000	24510.000	92.600	92.550	93.560
2	11:32:57	93.860	94.680	491.500	24290.000	25150.000	95.440	96.150	96.030
3	11:33:24	94.030	94.790	490.400	24310.000	25140.000	94.770	95.050	95.760
X		93.527%	93.925%	97.556%	96.459%	99.715%	94.271%	94.582%	95.117%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.784	1.495	1.125	1.311	1.472	1.573	1.949	1.423
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:30	95.320	96.300	97.090	95.170	96.830	94.500	0.000	96.130
2	11:32:57	95.850	99.930	100.400	97.690	103.700	97.340	0.000	95.990
3	11:33:24	94.970	98.560	100.700	95.820	102.000	99.010	0.000	96.650
X		95.379%	98.265%	99.409%	96.227%	100.853%	96.952%	0.000	96.258%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.467	1.866	2.027	1.359	3.559	2.349	0.000	0.364
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:30	88.494%	96.410	96.900	84.790%	97.120	95.890	98.030	95.380
2	11:32:57	90.927%	99.610	101.200	85.968%	98.010	98.480	100.000	98.110
3	11:33:24	91.871%	102.700	101.700	86.379%	97.720	97.450	97.390	97.790
X		90.431%	99.566%	99.924%	85.712%	97.615%	97.275%	98.481%	97.093%
σ		1.742%	n/a	n/a	0.824%	n/a	n/a	n/a	n/a
%RSD		1.927	3.151	2.627	0.962	0.465	1.337	1.391	1.537
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:32:30	87.483%	93.350	94.730	95.200	95.050	95.180	91.372%	90.562%
2	11:32:57	88.610%	96.150	96.930	97.670	97.460	97.140	91.909%	92.711%
3	11:33:24	89.960%	95.250	96.520	97.730	97.260	97.530	92.118%	93.194%
X		88.684%	94.920%	96.056%	96.864%	96.592%	96.616%	91.800%	92.155%
σ		1.240%	n/a	n/a	n/a	n/a	n/a	0.385%	1.401%
%RSD		1.399	1.505	1.217	1.491	1.382	1.302	0.419	1.521
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:32:30	103.800	103.400	102.800	103.700	102.500	85.225%		
2	11:32:57	105.100	104.500	106.600	105.800	105.700	84.989%		
3	11:33:24	105.800	103.900	105.900	106.500	106.000	85.689%		
X		104.910%	103.918%	105.103%	105.322%	104.734%	85.301%		
σ		n/a	n/a	n/a	n/a	n/a	0.356%		
%RSD		0.938	0.524	1.936	1.398	1.844	0.417		

CCB1 1/30/2015 11:36:22 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:48	83.450%	0.086	0.517	0.802	0.000	91.190	7.112	7.470
2	11:37:15	87.132%	-0.029	0.467	0.290	0.000	88.310	7.845	7.895
3	11:37:41	91.263%	-0.046	-0.262	0.223	0.000	81.400	7.168	6.141
X		87.282%	0.003	0.241	0.438	0.000	86.970	7.375	7.169
σ		3.909%	0.072	0.436	0.317	0.000	5.030	0.408	0.915
%RSD		4.478	2050.000	181.300	72.290	0.000	5.784	5.533	12.760
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:48	-3.484	9.053	0.000	54.950	0.744	10.900	90.515%	-0.193
2	11:37:15	-3.713	7.762	0.000	56.010	1.653	10.270	93.502%	-0.291
3	11:37:41	-3.807	8.063	0.000	71.840	-7.314	11.420	96.930%	-0.257
X		-3.668	8.293	0.000	60.930	-1.639	10.860	93.649%	-0.247
σ		0.166	0.675	0.000	9.460	4.936	0.578	3.210%	0.050
%RSD		4.526	8.143	0.000	15.520	301.100	5.321	3.428	20.120
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:48	0.006	-0.036	0.085	4.609	15.120	0.010	-0.098	0.230
2	11:37:15	-0.049	-0.027	0.073	1.450	6.992	-0.002	-0.072	0.146
3	11:37:41	-0.025	0.011	0.060	-2.710	2.989	-0.001	-0.025	0.132
X		-0.023	-0.017	0.072	1.116	8.366	0.002	-0.065	0.169
σ		0.027	0.025	0.012	3.671	6.180	0.007	0.037	0.053
%RSD		119.100	144.200	16.910	328.900	73.860	292.100	57.310	31.370
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:48	0.078	0.110	0.084	0.496	0.246	2.961	0.000	0.023
2	11:37:15	0.084	0.075	0.098	0.358	1.189	2.710	0.000	0.028
3	11:37:41	-0.019	0.079	0.120	-0.119	0.282	1.576	0.000	0.022
X		0.048	0.088	0.101	0.245	0.573	2.416	0.000	0.024
σ		0.058	0.019	0.018	0.322	0.534	0.738	0.000	0.003
%RSD		121.400	21.580	18.010	131.500	93.350	30.540	0.000	13.270
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:48	90.523%	1.784	1.740	91.009%	-0.044	-0.010	0.014	0.002
2	11:37:15	94.823%	1.682	1.693	94.167%	-0.027	-0.006	0.026	-0.020
3	11:37:41	97.118%	1.600	1.614	94.577%	0.005	-0.007	0.017	0.027
X		94.155%	1.689	1.683	93.251%	-0.022	-0.008	0.019	0.003
σ		3.348%	0.092	0.064	1.953%	0.025	0.002	0.006	0.023
%RSD		3.556	5.453	3.791	2.094	112.300	22.810	33.170	731.600
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:48	91.858%	-1.367	-0.011	-0.021	-0.028	0.018	90.941%	91.358%
2	11:37:15	93.809%	-1.296	-0.013	-0.018	-0.029	0.032	93.701%	94.026%
3	11:37:41	97.819%	-1.219	-0.045	-0.068	-0.030	0.013	95.396%	95.271%
X		94.495%	-1.294	-0.023	-0.036	-0.029	0.021	93.346%	93.552%
σ		3.039%	0.074	0.019	0.028	0.001	0.010	2.249%	1.999%
%RSD		3.216	5.704	82.900	78.500	4.469	46.410	2.409	2.137
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:36:48	0.011	0.015	0.015	0.020	0.020	89.356%		
2	11:37:15	0.015	0.014	0.013	0.021	0.019	90.165%		
3	11:37:41	0.014	0.013	0.030	0.014	0.022	92.708%		
X		0.014	0.014	0.019	0.019	0.020	90.743%		
σ		0.002	0.001	0.009	0.004	0.002	1.749%		
%RSD		15.220	7.805	48.100	19.150	8.527	1.928		

MB 180-131708/1-A

1/30/2015 11:40:39 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:06	87.839%	-0.017	-0.010	0.145	0.000	80.610	2.524	3.353
2	11:41:32	91.564%	-0.009	0.112	0.120	0.000	78.090	3.660	3.689
3	11:41:59	93.091%	-0.011	-0.197	0.094	0.000	76.160	3.925	3.227
X		90.831%	-0.012	-0.032	0.119	0.000	78.290	3.370	3.423
σ		2.701%	0.004	0.155	0.026	0.000	2.230	0.745	0.239
%RSD		2.974	33.440	489.000	21.350	0.000	2.848	22.090	6.975
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:06	-3.815	11.750	0.000	43.350	14.840	17.350	92.809%	-0.186
2	11:41:32	-3.723	11.560	0.000	39.320	1.092	16.140	96.545%	-0.340
3	11:41:59	-3.924	13.730	0.000	43.370	15.980	13.910	97.962%	-0.301
X		-3.821	12.350	0.000	42.010	10.640	15.800	95.772%	-0.276
σ		0.100	1.198	0.000	2.330	8.286	1.745	2.662%	0.080
%RSD		2.628	9.699	0.000	5.547	77.900	11.050	2.780	28.960
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:06	-0.023	-0.072	0.035	-14.890	-3.824	-0.001	-0.055	0.023
2	11:41:32	0.039	-0.052	0.036	-15.670	-3.719	-0.017	-0.005	-0.005
3	11:41:59	0.026	-0.076	0.050	-17.040	-4.665	-0.014	-0.192	-0.022
X		0.014	-0.067	0.040	-15.870	-4.069	-0.011	-0.084	-0.001
σ		0.033	0.013	0.008	1.092	0.519	0.009	0.097	0.022
%RSD		238.900	19.700	20.670	6.882	12.750	81.420	115.100	1861.000
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:06	-0.019	0.528	0.521	0.337	-0.426	1.547	0.000	0.009
2	11:41:32	-0.055	0.585	0.679	0.326	-0.401	2.333	0.000	0.005
3	11:41:59	-0.050	0.466	0.671	0.489	-0.531	3.073	0.000	0.003
X		-0.042	0.526	0.624	0.384	-0.453	2.318	0.000	0.005
σ		0.020	0.060	0.089	0.091	0.069	0.763	0.000	0.003
%RSD		46.960	11.360	14.320	23.740	15.300	32.920	0.000	58.080
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:06	92.655%	0.595	0.614	92.764%	-0.035	-0.025	-0.008	0.030
2	11:41:32	96.823%	0.661	0.570	95.219%	-0.021	-0.018	-0.008	0.031
3	11:41:59	97.429%	0.692	0.647	95.714%	-0.017	-0.008	-0.012	0.019
X		95.636%	0.650	0.611	94.566%	-0.024	-0.017	-0.009	0.027
σ		2.599%	0.050	0.038	1.580%	0.009	0.008	0.002	0.007
%RSD		2.718	7.632	6.279	1.671	38.370	48.870	26.930	24.720
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:06	91.784%	-1.578	-0.238	-0.258	-0.054	0.011	92.850%	92.295%
2	11:41:32	95.448%	-1.546	-0.222	-0.269	-0.055	0.008	95.707%	95.395%
3	11:41:59	96.687%	-1.396	-0.218	-0.240	-0.040	0.010	95.610%	95.687%
X		94.639%	-1.507	-0.226	-0.256	-0.050	0.010	94.722%	94.459%
σ		2.550%	0.097	0.011	0.015	0.008	0.002	1.622%	1.879%
%RSD		2.694	6.429	4.746	5.853	16.890	20.480	1.712	1.990
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:41:06	0.009	0.007	0.015	0.006	0.005	91.803%		
2	11:41:32	0.008	0.007	0.007	0.004	0.005	92.474%		
3	11:41:59	0.008	0.011	0.007	0.003	0.004	93.134%		
X		0.009	0.008	0.010	0.004	0.004	92.471%		
σ		0.001	0.003	0.004	0.001	0.001	0.666%		
%RSD		10.270	30.540	43.540	32.890	15.760	0.720		

PB 180-131595/1-C 1/30/2015 11:44:51 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:18	88.401%	0.008	-0.171	-0.000	0.000	80.040	2.269	2.219
2	11:45:45	93.824%	0.037	-0.421	0.072	0.000	73.280	2.066	2.559
3	11:46:11	96.023%	-0.087	-0.070	0.173	0.000	70.740	2.103	2.583
X		92.749%	-0.014	-0.220	0.082	0.000	74.690	2.146	2.454
σ		3.923%	0.065	0.181	0.087	0.000	4.803	0.108	0.203
%RSD		4.229	475.200	81.970	106.200	0.000	6.431	5.040	8.288
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:18	-3.723	9.264	0.000	42.900	18.320	14.830	95.293%	-0.224
2	11:45:45	-3.872	8.229	0.000	37.620	3.328	13.670	99.393%	-0.263
3	11:46:11	-3.296	9.252	0.000	30.750	5.649	14.020	101.192%	-0.308
X		-3.630	8.915	0.000	37.090	9.101	14.170	98.626%	-0.265
σ		0.299	0.594	0.000	6.090	8.072	0.593	3.024%	0.042
%RSD		8.236	6.666	0.000	16.420	88.700	4.185	3.066	15.950
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:18	0.012	-0.085	0.087	-19.900	-7.098	-0.022	-0.108	-0.019
2	11:45:45	-0.026	-0.088	0.086	-21.580	-6.534	-0.017	-0.112	0.012
3	11:46:11	-0.105	-0.063	0.083	-23.180	-10.440	-0.012	-0.102	0.028
X		-0.039	-0.078	0.085	-21.550	-8.024	-0.017	-0.107	0.007
σ		0.060	0.014	0.002	1.643	2.112	0.005	0.005	0.024
%RSD		151.700	17.630	2.323	7.625	26.320	29.780	4.636	330.900
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:18	-0.022	0.313	0.327	0.180	-0.369	1.896	0.000	0.004
2	11:45:45	-0.057	0.386	0.305	0.083	0.715	0.616	0.000	0.015
3	11:46:11	-0.007	0.287	0.194	0.216	1.155	2.259	0.000	0.017
X		-0.029	0.329	0.276	0.160	0.500	1.590	0.000	0.012
σ		0.026	0.051	0.072	0.069	0.784	0.863	0.000	0.007
%RSD		88.670	15.630	26.030	43.190	156.900	54.260	0.000	60.560
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:18	95.148%	0.282	0.286	94.483%	-0.043	-0.044	-0.008	0.049
2	11:45:45	99.165%	0.309	0.271	97.475%	-0.056	-0.023	-0.004	0.031
3	11:46:11	100.749%	0.269	0.271	99.139%	-0.044	-0.034	-0.004	0.020
X		98.354%	0.287	0.276	97.033%	-0.047	-0.034	-0.005	0.033
σ		2.887%	0.021	0.009	2.360%	0.007	0.011	0.002	0.014
%RSD		2.936	7.225	3.108	2.432	15.190	30.980	43.520	43.540
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:45:18	94.536%	-1.674	-0.320	-0.312	-0.065	-0.010	93.773%	93.450%
2	11:45:45	96.951%	-1.700	-0.325	-0.322	-0.055	0.001	97.740%	97.377%
3	11:46:11	100.109%	-1.629	-0.306	-0.318	-0.051	0.007	98.199%	98.618%
X		97.199%	-1.668	-0.317	-0.317	-0.057	-0.001	96.570%	96.482%
σ		2.794%	0.036	0.010	0.005	0.007	0.008	2.434%	2.698%
%RSD		2.875	2.145	3.105	1.624	12.590	1608.000	2.520	2.796
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:45:18	0.005	0.005	-0.002	0.002	0.000	92.513%		
2	11:45:45	0.008	0.003	0.000	0.008	0.003	93.461%		
3	11:46:11	0.001	0.004	0.004	-0.001	-0.005	95.672%		
X		0.005	0.004	0.001	0.003	-0.000	93.882%		
σ		0.003	0.001	0.003	0.005	0.004	1.621%		
%RSD		71.150	20.830	361.600	154.400	963.000	1.726		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	11:49:30	95.035%	42.850	900.200	874.200	0.000	42950.000	41030.000	41190.000	
2	11:49:56	100.984%	44.200	896.300	875.000	0.000	42060.000	41050.000	41420.000	
3	11:50:23	101.948%	44.160	915.200	889.100	0.000	43140.000	41440.000	41660.000	
X		99.322%	43.740	903.900	879.500	0.000	42710.000	41170.000	41420.000	
		σ	3.744%	0.771	9.995	8.377	0.000	573.200	233.000	234.700
		%RSD	3.770	1.763	1.106	0.953	0.000	1.342	0.566	0.567
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	11:49:30	1709.000	8411.000	0.000	46480.000	46900.000	47580.000	82.997%	944.200	
2	11:49:56	1709.000	8376.000	0.000	46340.000	47950.000	49060.000	87.356%	965.800	
3	11:50:23	1728.000	8386.000	0.000	47140.000	48560.000	48420.000	89.153%	973.600	
X		1716.000	8391.000	0.000	46650.000	47800.000	48360.000	86.502%	961.200	
		σ	10.750	18.010	0.000	425.200	838.500	742.000	3.165%	15.260
		%RSD	0.627	0.215	0.000	0.912	1.754	1.534	3.659	1.588
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	11:49:30	512.100	195.500	473.100	949.700	1128.000	483.500	469.000	241.500	
2	11:49:56	536.100	199.800	484.300	965.700	1129.000	494.000	475.600	243.100	
3	11:50:23	532.200	198.000	485.100	978.800	1142.000	492.500	475.100	241.700	
X		526.800	197.800	480.900	964.700	1133.000	490.000	473.200	242.100	
		σ	12.860	2.153	6.696	14.560	7.444	5.662	3.666	0.853
		%RSD	2.441	1.089	1.392	1.509	0.657	1.155	0.775	0.353
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	11:49:30	236.400	476.300	475.400	41.450	9.252	8.181	0.000	995.400	
2	11:49:56	242.500	485.200	489.100	42.780	9.750	10.650	0.000	995.900	
3	11:50:23	241.600	487.200	487.900	41.460	8.790	8.430	0.000	1004.000	
X		240.200	482.900	484.200	41.900	9.264	9.087	0.000	998.600	
		σ	3.278	5.805	7.625	0.764	0.480	1.360	0.000	5.019
		%RSD	1.365	1.202	1.575	1.823	5.184	14.970	0.000	0.503
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	11:49:30	80.995%	1034.000	1070.000	77.311%	50.710	50.180	51.310	40.830	
2	11:49:56	84.823%	1069.000	1112.000	80.008%	50.280	50.240	51.760	41.250	
3	11:50:23	87.399%	1071.000	1111.000	81.073%	50.940	50.730	51.960	41.980	
X		84.405%	1058.000	1098.000	79.464%	50.640	50.380	51.680	41.360	
		σ	3.222%	20.870	23.560	1.939%	0.337	0.299	0.331	0.579
		%RSD	3.817	1.973	2.146	2.440	0.665	0.594	0.640	1.401
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	11:49:30	78.445%	2099.000	514.500	512.700	1973.000	2049.000	84.309%	85.189%	
2	11:49:56	82.352%	2081.000	513.400	515.800	2008.000	2070.000	88.055%	89.250%	
3	11:50:23	82.792%	2097.000	523.400	523.500	2031.000	2094.000	89.455%	90.418%	
X		81.196%	2092.000	517.100	517.300	2004.000	2071.000	87.273%	88.286%	
		σ	2.393%	9.451	5.475	5.576	28.790	22.800	2.661%	2.745%
		%RSD	2.947	0.452	1.059	1.078	1.437	1.101	3.049	3.109
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	11:49:30	53.440	51.990	22.010	22.210	22.050	76.700%			
2	11:49:56	53.940	52.960	22.230	22.160	22.040	80.624%			
3	11:50:23	51.830	50.750	21.150	20.900	20.850	86.005%			
X		53.070	51.900	21.800	21.760	21.640	81.110%			
		σ	1.100	1.105	0.568	0.741	0.690	4.671%		
		%RSD	2.074	2.130	2.607	3.407	3.190	5.759		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:53:42	94.729%	-0.023	41.430	40.710	0.000	72300.000	25230.000	25110.000
2	11:54:09	95.703%	0.024	41.080	42.890	0.000	73010.000	25780.000	25760.000
3	11:54:35	99.523%	-0.029	41.730	41.270	0.000	72440.000	25710.000	25750.000
X		96.652%	-0.009	41.410	41.620	0.000	72580.000	25580.000	25540.000
σ		2.533%	0.029	0.324	1.133	0.000	373.800	298.700	373.200
%RSD		2.621	310.500	0.783	2.723	0.000	0.515	1.168	1.461
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:53:42	-1.999	3425.000	0.000	30590.000	115600.000	116100.000	80.417%	1.417
2	11:54:09	-2.195	3432.000	0.000	29960.000	115900.000	118500.000	84.862%	1.269
3	11:54:35	-2.350	3394.000	0.000	30760.000	119300.000	120500.000	86.925%	1.350
X		-2.181	3417.000	0.000	30440.000	117000.000	118300.000	84.068%	1.345
σ		0.176	20.070	0.000	425.200	2050.000	2195.000	3.326%	0.074
%RSD		8.061	0.588	0.000	1.397	1.753	1.855	3.956	5.532
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:53:42	9.566	20.530	4.515	20.470	524.400	0.345	0.327	3.135
2	11:54:09	16.270	20.690	4.581	22.320	500.500	0.290	0.258	3.147
3	11:54:35	15.540	20.920	4.715	21.580	482.400	0.340	0.116	3.139
X		13.790	20.710	4.604	21.460	502.400	0.325	0.234	3.141
σ		3.679	0.200	0.102	0.934	21.050	0.030	0.108	0.007
%RSD		26.670	0.967	2.213	4.355	4.190	9.300	46.060	0.208
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:53:42	3.311	60.470	60.860	-1.814	-1.343	2.745	0.000	258.200
2	11:54:09	2.992	62.780	62.680	10.130	0.863	4.228	0.000	267.800
3	11:54:35	3.025	61.770	62.310	2.389	0.801	1.925	0.000	266.800
X		3.109	61.670	61.950	3.568	0.107	2.966	0.000	264.300
σ		0.175	1.156	0.961	6.058	1.256	1.167	0.000	5.240
%RSD		5.643	1.875	1.552	169.800	1171.000	39.360	0.000	1.983
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:53:42	80.530%	4.639	4.735	76.375%	0.054	0.051	0.018	-0.080
2	11:54:09	84.027%	3.892	3.892	78.435%	0.056	0.044	0.032	0.019
3	11:54:35	86.931%	3.106	3.219	79.755%	0.034	0.045	0.007	0.013
X		83.829%	3.879	3.948	78.188%	0.048	0.047	0.019	-0.016
σ		3.205%	0.767	0.759	1.703%	0.012	0.004	0.012	0.056
%RSD		3.823	19.770	19.230	2.179	25.660	7.900	63.620	352.100
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:53:42	79.375%	5.099	0.162	0.195	103.000	102.300	84.888%	85.413%
2	11:54:09	83.081%	4.058	0.201	0.199	103.800	103.900	87.873%	88.153%
3	11:54:35	83.270%	3.501	0.192	0.220	105.500	104.000	90.021%	91.119%
X		81.909%	4.219	0.185	0.205	104.100	103.400	87.594%	88.229%
σ		2.196%	0.812	0.021	0.013	1.283	0.935	2.578%	2.854%
%RSD		2.682	19.230	11.110	6.529	1.232	0.905	2.943	3.234
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:53:42	0.156	0.143	1.253	1.086	1.166	78.224%		
2	11:54:09	0.097	0.087	1.277	1.100	1.183	81.298%		
3	11:54:35	0.065	0.081	1.245	1.173	1.211	81.652%		
X		0.106	0.104	1.258	1.120	1.187	80.391%		
σ		0.046	0.034	0.017	0.047	0.023	1.885%		
%RSD		43.860	32.930	1.317	4.188	1.924	2.345		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:54	89.156%	-0.043	48.200	46.720	0.000	86790.000	23110.000	22850.000
2	11:58:21	91.943%	-0.046	49.730	48.190	0.000	87680.000	23590.000	23430.000
3	11:58:47	94.262%	-0.073	46.390	46.710	0.000	87050.000	23230.000	23250.000
X		91.787%	-0.054	48.110	47.210	0.000	87170.000	23310.000	23180.000
		2.557%	0.016	1.674	0.855	0.000	462.200	248.000	296.600
		2.785	30.340	3.480	1.811	0.000	0.530	1.064	1.280
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:54	2.315	3976.000	0.000	29200.000	144300.000	146000.000	80.540%	1.567
2	11:58:21	2.036	3969.000	0.000	30030.000	149600.000	150700.000	82.324%	1.586
3	11:58:47	2.179	3943.000	0.000	29350.000	149400.000	151900.000	82.537%	1.661
X		2.176	3963.000	0.000	29530.000	147800.000	149500.000	81.800%	1.605
		0.140	17.790	0.000	444.100	3032.000	3125.000	1.097%	0.050
		6.421	0.449	0.000	1.504	2.051	2.090	1.341	3.112
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:54	12.400	33.620	186.900	132.900	731.000	0.624	13.340	14.450
2	11:58:21	5.361	33.910	193.400	138.400	731.900	0.577	13.530	14.570
3	11:58:47	3.202	34.600	195.200	139.300	719.400	0.686	13.650	15.160
X		6.987	34.040	191.800	136.900	727.400	0.629	13.500	14.730
		4.808	0.507	4.384	3.458	6.984	0.055	0.157	0.381
		68.820	1.490	2.286	2.527	0.960	8.729	1.160	2.586
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:54	14.630	29.670	29.540	7.294	0.362	2.244	0.000	452.500
2	11:58:21	14.580	30.800	31.310	-1.578	-0.112	1.867	0.000	465.200
3	11:58:47	15.520	29.770	30.550	2.081	-0.331	1.748	0.000	464.100
X		14.910	30.080	30.470	2.599	-0.027	1.953	0.000	460.600
		0.530	0.623	0.886	4.459	0.354	0.259	0.000	7.021
		3.555	2.070	2.909	171.600	1315.000	13.250	0.000	1.524
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:54	79.498%	0.832	0.809	76.028%	0.029	0.060	0.029	-0.523
2	11:58:21	83.159%	0.829	0.860	78.089%	0.057	0.048	0.018	0.028
3	11:58:47	84.138%	0.732	0.744	78.749%	0.079	0.072	0.057	0.023
X		82.265%	0.798	0.804	77.622%	0.055	0.060	0.035	-0.157
		2.446%	0.057	0.058	1.420%	0.025	0.012	0.020	0.317
		2.973	7.097	7.250	1.829	45.420	20.190	57.960	201.200
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:54	77.237%	0.185	-0.089	-0.071	115.500	116.800	85.475%	85.236%
2	11:58:21	80.649%	0.460	-0.099	-0.049	115.200	116.700	88.166%	89.002%
3	11:58:47	81.181%	0.486	-0.073	-0.075	115.000	116.900	89.031%	89.812%
X		79.689%	0.377	-0.087	-0.065	115.200	116.800	87.557%	88.017%
		2.140%	0.167	0.013	0.014	0.222	0.097	1.855%	2.442%
		2.686	44.370	15.020	21.950	0.193	0.083	2.118	2.775
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:57:54	0.057	0.052	1.934	1.785	1.828	79.678%		
2	11:58:21	0.055	0.052	1.972	1.878	1.874	81.670%		
3	11:58:47	0.032	0.051	1.983	1.810	1.873	83.030%		
X		0.048	0.052	1.963	1.824	1.858	81.459%		
		0.014	0.001	0.025	0.048	0.026	1.686%		
		28.780	1.547	1.293	2.646	1.408	2.070		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:10	88.664%	0.010	37.810	38.280	0.000	45610.000	7317.000	7231.000
2	12:02:36	92.295%	-0.008	37.750	38.350	0.000	45840.000	7426.000	7355.000
3	12:03:02	92.231%	0.004	37.860	34.530	0.000	45720.000	7359.000	7341.000
X		91.063%	0.002	37.810	37.050	0.000	45720.000	7367.000	7309.000
σ		2.078%	0.009	0.059	2.185	0.000	118.700	54.900	68.150
%RSD		2.282	409.600	0.155	5.896	0.000	0.260	0.745	0.933
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:10	11.780	2513.000	0.000	7977.000	72690.000	72570.000	78.029%	1.978
2	12:02:36	11.120	2526.000	0.000	8072.000	75670.000	74770.000	80.966%	2.574
3	12:03:02	12.140	2551.000	0.000	8016.000	74070.000	73840.000	83.472%	1.703
X		11.680	2530.000	0.000	8022.000	74140.000	73730.000	80.823%	2.085
σ		0.519	19.570	0.000	47.660	1493.000	1104.000	2.724%	0.445
%RSD		4.447	0.773	0.000	0.594	2.014	1.498	3.371	21.340
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:10	11.990	14.580	175.300	137.800	426.700	5.384	4.423	203.700
2	12:02:36	13.880	14.140	179.900	136.300	425.800	5.419	4.560	204.300
3	12:03:02	21.540	13.320	178.000	135.700	413.500	5.383	4.285	204.100
X		15.800	14.010	177.800	136.600	422.000	5.395	4.423	204.000
σ		5.056	0.638	2.284	1.092	7.369	0.020	0.138	0.323
%RSD		32.000	4.555	1.285	0.800	1.746	0.373	3.114	0.158
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:10	198.300	340.200	343.000	8.197	0.401	0.175	0.000	165.100
2	12:02:36	204.500	350.800	349.600	4.608	-0.414	0.690	0.000	168.600
3	12:03:02	202.900	348.700	354.200	2.798	-0.177	1.454	0.000	172.700
X		201.900	346.600	348.900	5.201	-0.063	0.773	0.000	168.800
σ		3.226	5.609	5.636	2.748	0.419	0.643	0.000	3.806
%RSD		1.598	1.618	1.615	52.840	663.800	83.200	0.000	2.255
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:10	79.912%	0.915	0.902	76.977%	0.008	0.023	0.065	0.077
2	12:02:36	82.816%	0.964	0.980	79.058%	0.022	0.028	0.101	0.067
3	12:03:02	83.960%	0.930	0.935	80.254%	0.029	0.032	0.056	0.100
X		82.229%	0.936	0.939	78.763%	0.020	0.028	0.074	0.081
σ		2.087%	0.025	0.039	1.659%	0.011	0.004	0.024	0.017
%RSD		2.538	2.679	4.200	2.106	53.590	15.780	32.280	20.360
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:10	77.485%	-0.527	0.056	0.034	50.900	51.680	85.382%	86.715%
2	12:02:36	81.414%	-0.090	0.018	0.104	52.000	52.500	88.237%	87.912%
3	12:03:02	82.441%	-0.124	0.066	0.100	52.840	51.900	89.520%	90.362%
X		80.447%	-0.247	0.047	0.079	51.910	52.030	87.713%	88.330%
σ		2.615%	0.243	0.025	0.039	0.970	0.427	2.118%	1.859%
%RSD		3.251	98.370	54.170	49.920	1.869	0.821	2.415	2.105
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:02:10	0.024	0.018	30.860	27.530	28.880	80.617%		
2	12:02:36	0.030	0.020	31.120	27.670	28.990	82.838%		
3	12:03:02	0.027	0.022	31.490	27.600	29.060	84.300%		
X		0.027	0.020	31.160	27.600	28.980	82.585%		
σ		0.003	0.002	0.318	0.071	0.089	1.854%		
%RSD		12.300	11.020	1.022	0.259	0.307	2.245		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:25	82.930%	0.020	88.290	84.260	0.000	66050.000	14110.000	13920.000
2	12:06:52	90.854%	0.020	86.620	83.110	0.000	64520.000	13870.000	13130.000
3	12:07:18	90.162%	-0.057	89.020	85.200	0.000	65240.000	13990.000	13150.000
X		87.982%	-0.006	87.980	84.190	0.000	65270.000	13990.000	13400.000
σ		4.389%	0.044	1.227	1.047	0.000	766.200	120.200	449.800
%RSD		4.988	773.300	1.395	1.243	0.000	1.174	0.860	3.356
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:25	6.822	3722.000	0.000	13240.000	131300.000	130600.000	75.750%	1.964
2	12:06:52	7.422	3439.000	0.000	13010.000	131400.000	134000.000	78.966%	2.599
3	12:07:18	7.728	3424.000	0.000	13030.000	130800.000	131900.000	81.917%	2.106
X		7.324	3528.000	0.000	13090.000	131200.000	132200.000	78.878%	2.223
σ		0.461	168.000	0.000	129.100	335.100	1743.000	3.085%	0.333
%RSD		6.293	4.762	0.000	0.986	0.256	1.319	3.911	14.980
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:25	15.530	45.860	34.080	37.070	566.300	0.781	15.720	3.220
2	12:06:52	15.590	47.280	35.450	37.510	548.100	0.910	15.980	3.332
3	12:07:18	6.042	46.530	35.000	36.850	532.300	0.801	15.040	3.223
X		12.390	46.560	34.840	37.140	548.900	0.831	15.580	3.258
σ		5.495	0.707	0.694	0.333	17.010	0.069	0.483	0.064
%RSD		44.360	1.519	1.993	0.897	3.099	8.362	3.102	1.970
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:25	3.273	18.080	19.470	13.990	-0.130	1.376	0.000	238.000
2	12:06:52	3.551	18.960	19.380	3.167	1.073	-0.261	0.000	245.700
3	12:07:18	3.202	18.830	18.490	4.669	-0.927	0.617	0.000	243.700
X		3.342	18.620	19.110	7.275	0.005	0.578	0.000	242.500
σ		0.184	0.472	0.539	5.862	1.007	0.819	0.000	3.975
%RSD		5.518	2.536	2.821	80.580	18870.000	141.900	0.000	1.639
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:25	77.576%	0.511	0.628	74.440%	-0.015	0.003	0.061	0.053
2	12:06:52	81.987%	0.503	0.607	76.018%	-0.033	-0.001	0.058	0.091
3	12:07:18	84.828%	0.589	0.589	77.708%	0.016	0.011	0.082	0.084
X		81.464%	0.534	0.608	76.055%	-0.011	0.004	0.067	0.076
σ		3.654%	0.048	0.019	1.634%	0.025	0.006	0.013	0.020
%RSD		4.486	8.898	3.179	2.149	234.900	141.400	19.680	26.310
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:25	76.806%	-0.998	-0.213	-0.183	60.040	60.070	84.722%	86.282%
2	12:06:52	81.683%	-0.811	-0.183	-0.185	60.120	60.370	87.201%	87.635%
3	12:07:18	81.431%	-0.679	-0.162	-0.166	62.360	59.750	89.762%	89.959%
X		79.973%	-0.829	-0.186	-0.178	60.840	60.060	87.228%	87.959%
σ		2.746%	0.160	0.026	0.010	1.317	0.308	2.520%	1.859%
%RSD		3.434	19.340	13.880	5.881	2.165	0.513	2.889	2.114
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:06:25	0.010	0.021	1.118	1.061	1.064	77.832%		
2	12:06:52	0.025	0.028	1.092	1.039	1.076	81.346%		
3	12:07:18	0.043	0.025	1.121	1.077	1.062	82.167%		
X		0.026	0.025	1.111	1.059	1.067	80.449%		
σ		0.017	0.003	0.016	0.019	0.008	2.303%		
%RSD		63.370	12.780	1.439	1.797	0.715	2.862		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:40	82.317%	-0.050	36.490	35.400	0.000	51760.000	17510.000	17460.000
2	12:11:06	88.332%	0.037	36.110	35.230	0.000	50710.000	17510.000	17620.000
3	12:11:33	89.166%	-0.043	35.990	35.020	0.000	50810.000	17570.000	17290.000
X		86.605%	-0.018	36.200	35.210	0.000	51090.000	17530.000	17460.000
σ		3.737%	0.048	0.263	0.189	0.000	579.700	34.470	169.200
%RSD		4.315	262.100	0.727	0.538	0.000	1.135	0.197	0.969
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:40	19.670	3739.000	0.000	6900.000	94900.000	94770.000	74.514%	1.713
2	12:11:06	20.880	3681.000	0.000	6808.000	96660.000	99290.000	78.140%	7.811
3	12:11:33	20.450	3665.000	0.000	6818.000	98620.000	100600.000	80.577%	2.268
X		20.330	3695.000	0.000	6842.000	96720.000	98230.000	77.743%	3.931
σ		0.613	38.930	0.000	50.780	1861.000	3071.000	3.051%	3.372
%RSD		3.016	1.054	0.000	0.742	1.924	3.126	3.924	85.790
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:40	4.652	30.290	29.060	185.900	564.100	0.294	20.260	61.060
2	12:11:06	9.708	30.160	29.880	195.200	547.700	0.307	19.940	61.770
3	12:11:33	6.951	29.910	29.740	188.300	530.700	0.281	18.930	61.450
X		7.104	30.120	29.560	189.800	547.500	0.294	19.710	61.430
σ		2.531	0.192	0.441	4.848	16.710	0.013	0.696	0.355
%RSD		35.630	0.636	1.492	2.554	3.053	4.402	3.531	0.578
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:40	60.770	239.900	239.000	1.146	-0.239	0.852	0.000	280.300
2	12:11:06	61.860	246.400	243.100	6.961	-1.678	1.260	0.000	283.900
3	12:11:33	59.420	238.200	240.300	3.191	-1.024	-0.163	0.000	285.800
X		60.680	241.500	240.800	3.766	-0.980	0.650	0.000	283.400
σ		1.225	4.320	2.112	2.950	0.721	0.733	0.000	2.794
%RSD		2.018	1.789	0.877	78.330	73.490	112.700	0.000	0.986
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:40	77.207%	0.202	0.220	74.596%	-0.035	-0.017	0.046	0.044
2	12:11:06	81.695%	0.217	0.285	76.684%	-0.022	-0.021	0.034	0.028
3	12:11:33	83.474%	0.304	0.243	77.287%	-0.023	-0.030	0.038	0.012
X		80.792%	0.241	0.249	76.189%	-0.027	-0.023	0.039	0.028
σ		3.230%	0.055	0.033	1.412%	0.007	0.007	0.006	0.016
%RSD		3.998	23.000	13.310	1.853	27.320	29.020	15.660	55.570
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:10:40	76.617%	-0.995	-0.215	-0.229	62.200	63.970	84.643%	84.973%
2	12:11:06	79.343%	-0.931	-0.206	-0.210	63.150	64.780	88.417%	89.243%
3	12:11:33	81.792%	-0.909	-0.214	-0.202	63.890	63.490	89.773%	89.676%
X		79.251%	-0.945	-0.212	-0.213	63.080	64.080	87.611%	87.964%
σ		2.589%	0.045	0.005	0.014	0.847	0.654	2.658%	2.599%
%RSD		3.267	4.763	2.247	6.461	1.342	1.021	3.034	2.955
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:10:40	0.020	0.017	8.248	7.294	7.590	79.777%		
2	12:11:06	0.018	0.022	8.002	7.400	7.622	83.090%		
3	12:11:33	0.022	0.022	7.981	7.508	7.657	84.296%		
X		0.020	0.020	8.077	7.401	7.623	82.388%		
σ		0.002	0.003	0.149	0.107	0.034	2.340%		
%RSD		10.750	14.130	1.840	1.442	0.445	2.840		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:54	83.837%	0.200	13.380	12.530	0.000	9401.000	7274.000	7199.000
2	12:15:20	86.242%	0.163	12.920	13.000	0.000	9460.000	7431.000	7378.000
3	12:15:47	87.342%	0.106	13.620	12.300	0.000	9591.000	7585.000	7462.000
X		85.807%	0.156	13.300	12.610	0.000	9484.000	7430.000	7346.000
σ		1.793%	0.047	0.356	0.360	0.000	97.430	155.800	134.300
%RSD		2.089	30.180	2.675	2.855	0.000	1.027	2.096	1.828
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:54	910.300	2883.000	0.000	1996.000	20550.000	20040.000	74.537%	28.260
2	12:15:20	871.100	2933.000	0.000	2040.000	21830.000	20810.000	76.069%	29.450
3	12:15:47	921.800	2990.000	0.000	2031.000	21190.000	20560.000	77.499%	29.350
X		901.100	2935.000	0.000	2022.000	21190.000	20470.000	76.035%	29.020
σ		26.540	53.470	0.000	23.090	639.900	391.200	1.482%	0.661
%RSD		2.946	1.821	0.000	1.142	3.020	1.911	1.949	2.278
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:54	22.240	12.950	1148.000	2636.000	2600.000	3.078	4.269	6.417
2	12:15:20	15.930	13.410	1192.000	2726.000	2697.000	3.197	4.092	6.558
3	12:15:47	20.080	13.160	1192.000	2709.000	2709.000	3.131	4.581	6.832
X		19.420	13.170	1177.000	2690.000	2669.000	3.135	4.314	6.602
σ		3.207	0.230	25.240	47.810	59.750	0.059	0.247	0.211
%RSD		16.510	1.744	2.144	1.777	2.239	1.893	5.735	3.192
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:54	6.572	24.250	24.920	9.126	-1.672	-0.204	0.000	78.600
2	12:15:20	6.845	25.270	24.550	6.599	-1.053	-0.481	0.000	80.670
3	12:15:47	7.068	25.060	24.230	9.113	-1.130	0.160	0.000	80.890
X		6.828	24.860	24.570	8.279	-1.285	-0.175	0.000	80.050
σ		0.248	0.539	0.344	1.455	0.337	0.321	0.000	1.263
%RSD		3.633	2.170	1.399	17.580	26.230	183.400	0.000	1.577
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:54	77.513%	1.640	1.584	74.116%	-0.003	-0.023	0.056	-4.255
2	12:15:20	81.896%	1.753	1.702	75.640%	-0.039	-0.004	0.133	0.137
3	12:15:47	82.395%	1.625	1.783	76.854%	-0.016	0.003	0.069	0.046
X		80.601%	1.673	1.690	75.537%	-0.019	-0.008	0.086	-1.358
σ		2.686%	0.070	0.100	1.372%	0.018	0.014	0.041	2.510
%RSD		3.333	4.190	5.922	1.816	94.370	169.400	47.760	184.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:14:54	76.286%	-1.371	0.134	0.152	39.580	40.260	85.031%	85.137%
2	12:15:20	77.244%	-1.271	0.225	0.163	41.680	40.640	86.782%	87.428%
3	12:15:47	79.589%	-1.169	0.164	0.105	40.230	41.130	89.866%	89.365%
X		77.706%	-1.270	0.174	0.140	40.500	40.680	87.226%	87.310%
σ		1.699%	0.101	0.046	0.031	1.070	0.439	2.448%	2.116%
%RSD		2.186	7.945	26.700	21.840	2.642	1.080	2.806	2.424
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:14:54	0.014	0.020	3.899	3.616	3.660	83.863%		
2	12:15:20	0.029	0.020	4.004	3.555	3.716	86.764%		
3	12:15:47	0.018	0.024	3.940	3.650	3.711	88.286%		
X		0.021	0.021	3.948	3.607	3.696	86.304%		
σ		0.008	0.003	0.053	0.048	0.031	2.247%		
%RSD		38.280	12.180	1.337	1.336	0.834	2.604		

180-40655-L-1-A SD@5 1/30/2015 12:19:14 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:41	71.748%	1.013	3.250	2.537	0.000	1984.000	1469.000	1452.000
2	12:20:07	71.962%	0.172	2.851	2.244	0.000	2001.000	1444.000	1426.000
3	12:20:34	74.387%	0.084	2.931	2.776	0.000	1960.000	1447.000	1409.000
X		72.699%	0.423	3.011	2.519	0.000	1982.000	1453.000	1429.000
σ		1.466%	0.513	0.211	0.266	0.000	20.390	13.540	21.680
%RSD		2.016	121.300	7.005	10.560	0.000	1.029	0.931	1.517
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:41	181.500	558.500	0.000	405.700	4470.000	4079.000	68.466%	5.324
2	12:20:07	169.800	569.400	0.000	408.700	4244.000	3977.000	68.888%	5.402
3	12:20:34	169.600	552.400	0.000	400.300	4239.000	3969.000	69.522%	9.218
X		173.600	560.100	0.000	404.900	4318.000	4009.000	68.959%	6.648
σ		6.818	8.600	0.000	4.270	131.900	61.190	0.531%	2.226
%RSD		3.926	1.535	0.000	1.055	3.054	1.527	0.771	33.490
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:41	4.179	2.581	224.900	549.500	531.700	0.677	1.209	3.610
2	12:20:07	2.202	2.584	229.000	549.400	535.300	0.634	0.833	1.838
3	12:20:34	4.729	2.563	228.600	547.200	528.900	0.577	0.913	1.457
X		3.703	2.576	227.500	548.700	531.900	0.629	0.985	2.302
σ		1.329	0.011	2.276	1.311	3.190	0.050	0.198	1.149
%RSD		35.880	0.444	1.000	0.239	0.600	7.998	20.110	49.900
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:41	3.666	7.653	7.319	-0.008	-1.296	-0.150	0.000	16.290
2	12:20:07	1.870	5.456	5.747	0.635	-1.476	-0.800	0.000	15.850
3	12:20:34	1.430	5.433	5.626	1.503	-1.266	0.008	0.000	16.250
X		2.322	6.181	6.230	0.710	-1.346	-0.314	0.000	16.130
σ		1.185	1.275	0.945	0.758	0.114	0.428	0.000	0.240
%RSD		51.020	20.640	15.160	106.800	8.450	136.400	0.000	1.490
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:41	73.448%	1.195	0.991	73.676%	-0.025	-0.018	0.323	0.319
2	12:20:07	75.087%	0.626	0.660	74.305%	-0.054	-0.041	0.019	0.061
3	12:20:34	75.510%	0.544	0.591	74.587%	-0.047	-0.057	-0.002	-2.720
X		74.682%	0.789	0.747	74.189%	-0.042	-0.039	0.114	-0.780
σ		1.089%	0.355	0.214	0.466%	0.015	0.019	0.182	1.685
%RSD		1.458	44.950	28.660	0.629	36.170	50.200	159.900	215.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:19:41	75.145%	-1.691	0.028	0.036	8.401	8.249	84.060%	84.676%
2	12:20:07	76.828%	-1.781	-0.074	-0.054	7.888	8.482	85.580%	86.325%
3	12:20:34	77.966%	-1.790	-0.123	-0.133	7.857	7.728	85.589%	86.245%
X		76.646%	-1.754	-0.056	-0.050	8.049	8.153	85.076%	85.748%
σ		1.419%	0.055	0.077	0.084	0.305	0.386	0.880%	0.930%
%RSD		1.851	3.129	137.400	168.600	3.795	4.737	1.034	1.084
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:19:41	0.018	0.009	0.913	0.793	0.832	86.055%		
2	12:20:07	0.008	0.005	0.831	0.758	0.786	85.811%		
3	12:20:34	0.004	0.004	0.809	0.717	0.757	87.458%		
X		0.010	0.006	0.851	0.756	0.791	86.441%		
σ		0.007	0.003	0.055	0.038	0.038	0.889%		
%RSD		72.120	41.510	6.420	5.014	4.780	1.028		



CCV 1467888 1/30/2015 12:23:29 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	60.006%	90.450	92.370	93.850	0.000	47910.000	46190.000	45930.000
2	12:24:23	59.897%	96.430	91.690	98.650	0.000	48840.000	47380.000	47240.000
3	12:24:49	60.626%	95.580	97.030	98.140	0.000	48370.000	47020.000	46860.000
X		60.176%	94.150%	93.694%	96.879%	0.000	96.746%	93.724%	93.351%
σ		0.393%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		0.653	3.435	3.100	2.720	0.000	0.966	1.307	1.450
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	447.600	4980.000	0.000	48560.000	48690.000	49650.000	62.093%	100.500
2	12:24:23	461.500	4792.000	0.000	50430.000	49690.000	49580.000	63.083%	99.810
3	12:24:49	458.400	4760.000	0.000	49590.000	49570.000	50050.000	64.678%	100.900
X		91.170%	96.879%	0.000	99.049%	98.637%	99.522%	63.285%	100.426%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.304%	n/a
%RSD		1.601	2.456	0.000	1.892	1.107	0.517	2.061	0.569
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	94.800	95.330	484.600	24530.000	24960.000	95.470	95.620	97.920
2	12:24:23	95.350	96.850	498.700	25200.000	25630.000	97.810	97.270	98.670
3	12:24:49	95.030	96.030	496.700	25120.000	25570.000	97.610	95.990	98.350
X		95.060%	96.069%	98.670%	99.801%	101.559%	96.961%	96.292%	98.316%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.293	0.791	1.543	1.461	1.457	1.340	0.895	0.386
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	97.000	101.900	101.100	99.010	99.770	99.690	0.000	95.320
2	12:24:23	98.220	103.100	104.200	99.160	98.240	101.400	0.000	96.050
3	12:24:49	97.630	102.500	101.900	96.820	99.720	93.690	0.000	95.450
X		97.617%	102.487%	102.436%	98.329%	99.247%	98.255%	0.000	95.610%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.626	0.614	1.575	1.332	0.876	4.110	0.000	0.407
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	67.029%	91.980	92.280	67.737%	96.510	95.130	97.530	95.850
2	12:24:23	69.159%	96.190	96.900	68.633%	98.240	97.290	99.850	97.980
3	12:24:49	70.538%	98.760	99.830	69.668%	98.970	96.980	101.100	97.790
X		68.908%	95.644%	96.334%	68.679%	97.906%	96.465%	99.496%	97.207%
σ		1.768%	n/a	n/a	0.966%	n/a	n/a	n/a	n/a
%RSD		2.565	3.584	3.953	1.407	1.286	1.213	1.825	1.211
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	70.346%	92.690	95.430	95.140	93.100	95.030	76.980%	77.119%
2	12:24:23	71.373%	95.830	96.600	98.170	94.420	96.390	79.011%	79.292%
3	12:24:49	71.359%	96.030	98.080	99.210	96.130	97.460	80.122%	80.275%
X		71.026%	94.851%	96.702%	97.507%	94.550%	96.293%	78.705%	78.896%
σ		0.589%	n/a	n/a	n/a	n/a	n/a	1.593%	1.615%
%RSD		0.829	1.977	1.372	2.169	1.610	1.266	2.024	2.047
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:23:56	103.200	101.400	102.900	102.600	102.100	78.593%		
2	12:24:23	105.600	103.200	105.900	105.100	105.200	79.231%		
3	12:24:49	104.900	103.400	105.700	105.000	105.200	80.374%		
X		104.527%	102.688%	104.874%	104.242%	104.169%	79.399%		
σ		n/a	n/a	n/a	n/a	n/a	0.902%		
%RSD		1.166	1.077	1.609	1.374	1.683	1.136		

CCB2 1/30/2015 12:31:54 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:20	80.840%	-0.034	0.059	0.091	0.000	81.390	6.132	5.948
2	12:32:47	80.919%	-0.006	-0.200	0.435	0.000	81.590	5.899	6.373
3	12:33:13	83.468%	-0.023	0.117	0.166	0.000	76.490	4.926	6.137
X		81.742%	-0.021	-0.008	0.230	0.000	79.820	5.652	6.153
σ		1.495%	0.014	0.169	0.181	0.000	2.890	0.640	0.213
%RSD		1.829	67.780	2067.000	78.500	0.000	3.620	11.320	3.465
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:20	-4.074	-2.634	0.000	14.830	17.320	9.360	77.249%	-0.277
2	12:32:47	-4.094	-1.924	0.000	14.710	6.346	7.778	79.316%	-0.232
3	12:33:13	-4.329	-2.045	0.000	10.990	6.066	8.310	80.263%	-0.286
X		-4.166	-2.201	0.000	13.510	9.911	8.483	78.942%	-0.265
σ		0.142	0.380	0.000	2.180	6.419	0.805	1.541%	0.029
%RSD		3.407	17.250	0.000	16.140	64.770	9.489	1.952	10.900
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:20	0.033	-0.103	0.101	-32.540	-3.817	-0.008	-0.097	0.077
2	12:32:47	0.143	-0.070	0.040	-33.520	-5.829	-0.010	-0.136	0.124
3	12:33:13	-0.047	-0.023	0.073	-33.420	-10.570	0.008	-0.147	0.032
X		0.043	-0.065	0.071	-33.160	-6.740	-0.003	-0.127	0.077
σ		0.095	0.040	0.031	0.537	3.469	0.010	0.026	0.046
%RSD		220.300	62.090	42.860	1.619	51.470	340.600	20.560	59.610
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:20	0.063	0.093	0.025	-0.038	-0.268	-0.050	0.000	0.025
2	12:32:47	-0.013	0.072	0.093	0.100	-0.821	1.157	0.000	0.029
3	12:33:13	0.002	0.049	0.186	-0.024	0.010	-1.768	0.000	0.021
X		0.017	0.071	0.101	0.013	-0.360	-0.221	0.000	0.025
σ		0.040	0.022	0.081	0.076	0.423	1.470	0.000	0.004
%RSD		231.600	31.150	79.900	608.200	117.500	666.700	0.000	16.160
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:20	79.458%	0.153	0.101	77.391%	-0.056	-0.023	0.019	0.062
2	12:32:47	82.140%	0.123	0.150	79.270%	-0.052	-0.028	-0.002	0.083
3	12:33:13	82.820%	0.133	0.158	79.447%	-0.053	-0.033	0.008	-0.009
X		81.473%	0.137	0.136	78.703%	-0.054	-0.028	0.008	0.045
σ		1.777%	0.015	0.031	1.139%	0.002	0.005	0.010	0.048
%RSD		2.182	11.150	22.600	1.448	4.055	17.710	126.500	106.400
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:20	77.961%	-1.883	-0.265	-0.264	-0.027	0.023	81.938%	82.021%
2	12:32:47	80.201%	-1.869	-0.261	-0.273	0.031	0.005	84.675%	84.269%
3	12:33:13	81.155%	-1.807	-0.253	-0.281	-0.006	0.018	86.309%	85.742%
X		79.772%	-1.853	-0.260	-0.273	-0.001	0.015	84.307%	84.011%
σ		1.640%	0.041	0.006	0.008	0.029	0.009	2.209%	1.874%
%RSD		2.055	2.194	2.266	3.018	4197.000	60.510	2.620	2.230
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:32:20	0.016	0.012	0.030	0.032	0.029	86.075%		
2	12:32:47	0.016	0.016	0.037	0.028	0.034	87.387%		
3	12:33:13	0.020	0.011	0.024	0.032	0.030	87.411%		
X		0.018	0.013	0.030	0.031	0.031	86.958%		
σ		0.002	0.003	0.007	0.002	0.003	0.765%		
%RSD		13.690	23.490	21.580	7.367	9.287	0.879		

180-40655-L-1-B MS 1/30/2015 12:36:14 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:41	81.073%	45.230	957.300	909.500	0.000	52610.000	48460.000	47980.000
2	12:37:07	85.496%	47.100	964.000	920.800	0.000	53040.000	49570.000	49420.000
3	12:37:34	89.863%	47.670	940.200	909.900	0.000	52610.000	49100.000	48820.000
X		85.478%	46.670	953.800	913.400	0.000	52760.000	49040.000	48740.000
σ		4.395%	1.278	12.270	6.420	0.000	250.400	555.500	725.100
%RSD		5.142	2.739	1.286	0.703	0.000	0.475	1.133	1.488
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:41	6479.000	15240.000	0.000	50170.000	70640.000	71490.000	72.322%	979.100
2	12:37:07	6598.000	15420.000	0.000	50680.000	72330.000	72330.000	75.049%	999.500
3	12:37:34	6538.000	15270.000	0.000	50320.000	71960.000	73200.000	76.899%	1007.000
X		6538.000	15310.000	0.000	50390.000	71640.000	72340.000	74.756%	995.100
σ		59.660	97.170	0.000	264.300	887.500	855.200	2.302%	14.320
%RSD		0.913	0.635	0.000	0.525	1.239	1.182	3.080	1.439
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:41	494.900	193.800	1637.000	4092.000	4205.000	467.900	449.600	233.200
2	12:37:07	503.700	200.500	1675.000	4204.000	4279.000	480.000	460.000	243.000
3	12:37:34	518.800	202.000	1681.000	4203.000	4347.000	481.900	460.600	241.200
X		505.800	198.800	1664.000	4166.000	4277.000	476.600	456.800	239.100
σ		12.060	4.334	24.020	64.720	71.010	7.582	6.180	5.190
%RSD		2.385	2.181	1.444	1.553	1.660	1.591	1.353	2.170
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:41	231.200	501.900	491.200	38.590	7.189	10.430	0.000	1032.000
2	12:37:07	239.700	518.900	504.000	43.480	7.853	8.507	0.000	1057.000
3	12:37:34	237.100	513.600	512.200	44.910	9.011	9.468	0.000	1065.000
X		236.000	511.400	502.500	42.320	8.018	9.470	0.000	1051.000
σ		4.365	8.711	10.580	3.316	0.922	0.964	0.000	17.390
%RSD		1.849	1.703	2.106	7.834	11.500	10.170	0.000	1.654
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:41	76.979%	1002.000	1039.000	70.121%	49.640	49.790	51.260	40.860
2	12:37:07	81.449%	1025.000	1055.000	73.506%	50.230	48.870	51.560	42.190
3	12:37:34	82.530%	1051.000	1082.000	74.332%	50.520	49.340	52.650	41.840
X		80.320%	1026.000	1059.000	72.653%	50.130	49.330	51.820	41.630
σ		2.943%	24.590	21.910	2.231%	0.451	0.458	0.733	0.688
%RSD		3.664	2.397	2.070	3.071	0.900	0.929	1.415	1.652
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:41	72.233%	2093.000	518.200	517.500	2018.000	2086.000	84.122%	85.345%
2	12:37:07	76.068%	2106.000	521.000	516.800	2022.000	2075.000	87.943%	87.826%
3	12:37:34	77.074%	2133.000	525.800	519.500	2024.000	2125.000	90.011%	90.161%
X		75.125%	2111.000	521.700	517.900	2021.000	2095.000	87.359%	87.777%
σ		2.554%	20.330	3.857	1.434	3.085	26.350	2.988%	2.408%
%RSD		3.400	0.963	0.739	0.277	0.153	1.258	3.420	2.744
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:36:41	51.620	50.220	26.820	25.950	26.150	81.393%		
2	12:37:07	52.980	52.050	27.420	26.630	26.640	82.936%		
3	12:37:34	54.060	52.670	27.310	26.720	26.780	83.252%		
X		52.880	51.650	27.180	26.430	26.520	82.527%		
σ		1.223	1.273	0.321	0.423	0.328	0.995%		
%RSD		2.313	2.465	1.182	1.600	1.237	1.205		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:55	77.885%	49.580	994.500	959.500	0.000	54920.000	49950.000	49610.000
2	12:41:22	84.269%	47.940	993.500	930.700	0.000	53960.000	50160.000	49820.000
3	12:41:49	87.126%	46.940	989.200	927.000	0.000	53170.000	49320.000	49230.000
X		83.093%	48.150	992.400	939.100	0.000	54020.000	49810.000	49550.000
σ		4.731%	1.331	2.803	17.790	0.000	873.300	434.400	293.900
%RSD		5.694	2.765	0.282	1.894	0.000	1.617	0.872	0.593
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:55	6500.000	15620.000	0.000	51120.000	71150.000	72190.000	72.702%	991.400
2	12:41:22	6490.000	15360.000	0.000	51100.000	72210.000	73070.000	75.439%	1004.000
3	12:41:49	6388.000	15210.000	0.000	51360.000	72940.000	73710.000	76.211%	1016.000
X		6459.000	15390.000	0.000	51200.000	72100.000	72990.000	74.784%	1004.000
σ		62.230	208.500	0.000	142.500	896.900	765.600	1.844%	12.510
%RSD		0.963	1.354	0.000	0.278	1.244	1.049	2.466	1.246
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:55	503.900	196.200	1641.000	3986.000	4104.000	472.900	454.200	239.200
2	12:41:22	516.200	202.200	1669.000	4080.000	4195.000	483.600	461.200	241.600
3	12:41:49	526.000	201.500	1690.000	4090.000	4228.000	480.800	465.800	242.000
X		515.400	200.000	1667.000	4052.000	4176.000	479.100	460.400	240.900
σ		11.050	3.313	24.720	57.040	64.190	5.575	5.839	1.523
%RSD		2.144	1.657	1.483	1.408	1.537	1.164	1.268	0.632
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:55	236.500	511.600	504.400	39.890	8.801	9.949	0.000	1061.000
2	12:41:22	240.300	517.700	515.600	46.400	9.560	9.621	0.000	1074.000
3	12:41:49	239.100	522.900	513.400	38.390	8.178	7.870	0.000	1086.000
X		238.600	517.400	511.100	41.560	8.847	9.147	0.000	1074.000
σ		1.907	5.660	5.906	4.260	0.692	1.118	0.000	12.660
%RSD		0.799	1.094	1.156	10.250	7.825	12.220	0.000	1.178
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:55	77.433%	1032.000	1061.000	70.926%	50.390	49.600	53.390	43.060
2	12:41:22	81.455%	1055.000	1090.000	73.147%	50.890	50.340	52.650	36.520
3	12:41:49	82.230%	1056.000	1091.000	74.292%	50.840	49.770	52.830	37.570
X		80.373%	1048.000	1081.000	72.788%	50.700	49.900	52.960	39.050
σ		2.575%	13.220	16.920	1.711%	0.273	0.387	0.383	3.515
%RSD		3.204	1.262	1.565	2.351	0.538	0.775	0.724	9.002
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:40:55	72.573%	2126.000	543.500	527.600	2040.000	2108.000	85.639%	85.393%
2	12:41:22	76.146%	2124.000	522.700	524.400	2025.000	2084.000	88.632%	88.007%
3	12:41:49	76.545%	2140.000	531.700	529.700	2052.000	2116.000	88.945%	89.914%
X		75.088%	2130.000	532.600	527.200	2039.000	2102.000	87.739%	87.771%
σ		2.187%	8.758	10.410	2.687	13.530	16.560	1.825%	2.269%
%RSD		2.913	0.411	1.955	0.510	0.664	0.788	2.080	2.586
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:40:55	52.880	51.930	27.090	27.070	26.840	80.612%		
2	12:41:22	54.580	52.700	27.080	26.890	26.830	83.470%		
3	12:41:49	54.660	53.380	27.180	27.150	27.220	83.020%		
X		54.040	52.670	27.120	27.040	26.960	82.367%		
σ		1.005	0.726	0.054	0.132	0.225	1.537%		
%RSD		1.860	1.379	0.198	0.486	0.833	1.866		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:08	78.672%	43.030	906.500	865.700	0.000	51110.000	46760.000	46870.000
2	12:45:34	81.184%	45.590	911.100	875.000	0.000	52090.000	48110.000	47460.000
3	12:46:01	83.014%	46.010	942.100	889.100	0.000	52520.000	48530.000	48250.000
X		80.957%	44.880	919.900	876.600	0.000	51910.000	47800.000	47530.000
		2.180%	1.609	19.380	11.790	0.000	721.400	922.700	693.900
		2.693	3.586	2.107	1.345	0.000	1.390	1.930	1.460
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:08	2424.000	10720.000	0.000	48510.000	67930.000	69020.000	71.023%	972.700
2	12:45:34	2492.000	10910.000	0.000	49140.000	69150.000	70670.000	74.509%	985.400
3	12:46:01	2516.000	11000.000	0.000	49110.000	68910.000	70290.000	75.145%	990.500
X		2477.000	10880.000	0.000	48920.000	68660.000	69990.000	73.559%	982.900
		47.940	144.500	0.000	354.900	647.600	867.300	2.219%	9.164
		1.935	1.329	0.000	0.726	0.943	1.239	3.017	0.932
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:08	472.000	183.900	1574.000	3411.000	3523.000	443.400	429.700	221.200
2	12:45:34	496.900	185.000	1576.000	3468.000	3576.000	444.800	434.700	224.900
3	12:46:01	484.600	186.400	1602.000	3527.000	3638.000	452.100	435.700	227.900
X		484.500	185.100	1584.000	3469.000	3579.000	446.800	433.400	224.700
		12.430	1.288	15.530	57.680	57.470	4.690	3.224	3.368
		2.565	0.696	0.981	1.663	1.606	1.050	0.744	1.499
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:08	220.200	473.500	466.500	39.300	8.187	8.676	0.000	988.100
2	12:45:34	221.000	476.400	476.200	41.390	8.146	9.830	0.000	1015.000
3	12:46:01	223.200	490.200	480.500	38.650	6.240	7.885	0.000	1014.000
X		221.500	480.100	474.400	39.780	7.524	8.797	0.000	1006.000
		1.533	8.920	7.140	1.432	1.113	0.978	0.000	15.300
		0.692	1.858	1.505	3.600	14.790	11.120	0.000	1.521
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:08	76.312%	1014.000	1032.000	71.147%	45.260	44.290	47.890	33.510
2	12:45:34	79.156%	1050.000	1077.000	72.642%	46.090	44.920	49.630	34.770
3	12:46:01	80.805%	1053.000	1087.000	73.589%	46.080	44.840	50.880	39.320
X		78.758%	1039.000	1065.000	72.459%	45.810	44.680	49.470	35.870
		2.273%	21.710	29.370	1.231%	0.474	0.344	1.501	3.054
		2.886	2.090	2.756	1.699	1.036	0.769	3.035	8.514
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:45:08	74.388%	2078.000	513.300	507.500	1861.000	1899.000	85.266%	85.789%
2	12:45:34	75.664%	2140.000	542.800	519.100	1904.000	1981.000	88.477%	88.402%
3	12:46:01	76.412%	2153.000	529.200	523.300	1894.000	1964.000	89.134%	89.616%
X		75.488%	2124.000	528.400	516.700	1886.000	1948.000	87.626%	87.936%
		1.023%	39.940	14.750	8.192	22.490	42.860	2.069%	1.955%
		1.356	1.880	2.792	1.586	1.192	2.200	2.362	2.224
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:45:08	48.750	48.840	24.270	23.710	23.810	82.344%		
2	12:45:34	50.680	49.720	24.820	24.510	24.310	83.362%		
3	12:46:01	50.450	49.530	24.310	23.860	23.890	85.440%		
X		49.960	49.360	24.470	24.020	24.000	83.715%		
		1.054	0.462	0.307	0.427	0.267	1.578%		
		2.111	0.935	1.257	1.778	1.114	1.885		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:22	81.407%	0.081	48.780	52.100	0.000	40060.000	25450.000	25350.000
2	12:49:49	82.402%	0.105	55.680	53.130	0.000	39520.000	25340.000	25290.000
3	12:50:15	86.114%	0.218	56.480	52.530	0.000	40380.000	25780.000	25520.000
X		83.308%	0.135	53.650	52.590	0.000	39990.000	25520.000	25390.000
σ		2.481%	0.073	4.235	0.519	0.000	436.700	229.600	120.500
%RSD		2.978	54.390	7.893	0.987	0.000	1.092	0.900	0.475
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:22	2091.000	10530.000	0.000	9054.000	52720.000	53460.000	70.876%	79.650
2	12:49:49	2066.000	10290.000	0.000	8820.000	51190.000	51280.000	76.513%	78.630
3	12:50:15	2137.000	10410.000	0.000	8988.000	53190.000	53930.000	75.083%	77.910
X		2098.000	10410.000	0.000	8954.000	52370.000	52890.000	74.157%	78.730
σ		35.880	122.300	0.000	121.000	1046.000	1416.000	2.931%	0.877
%RSD		1.710	1.175	0.000	1.351	1.998	2.678	3.952	1.114
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:22	14.770	15.550	4572.000	3983.000	3991.000	3.469	6.705	6.281
2	12:49:49	15.940	14.910	4487.000	3944.000	3957.000	3.262	6.270	6.060
3	12:50:15	10.160	14.970	4632.000	4075.000	4057.000	3.379	6.610	6.324
X		13.620	15.140	4564.000	4001.000	4002.000	3.370	6.528	6.221
σ		3.054	0.354	72.630	67.200	50.690	0.104	0.229	0.141
%RSD		22.420	2.340	1.591	1.680	1.267	3.081	3.501	2.272
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:22	6.337	34.190	33.370	7.521	-0.738	0.752	0.000	320.800
2	12:49:49	5.945	33.910	33.470	14.880	0.064	1.994	0.000	327.200
3	12:50:15	6.337	34.570	34.420	5.898	-0.192	0.444	0.000	332.200
X		6.206	34.220	33.750	9.433	-0.289	1.064	0.000	326.700
σ		0.226	0.333	0.582	4.787	0.410	0.821	0.000	5.723
%RSD		3.641	0.973	1.724	50.740	142.000	77.150	0.000	1.752
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:22	75.380%	11.230	11.650	70.953%	0.018	0.023	0.196	0.089
2	12:49:49	78.728%	11.190	10.750	73.822%	0.031	0.047	0.163	0.082
3	12:50:15	80.180%	10.220	10.470	74.239%	-0.008	0.055	0.133	0.108
X		78.096%	10.880	10.960	73.005%	0.014	0.042	0.164	0.093
σ		2.461%	0.571	0.613	1.789%	0.020	0.016	0.031	0.013
%RSD		3.152	5.244	5.597	2.450	142.100	39.480	19.100	14.400
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:49:22	73.461%	3.307	0.391	0.316	99.600	100.900	84.737%	85.147%
2	12:49:49	75.564%	2.144	0.347	0.318	99.720	101.000	87.392%	87.993%
3	12:50:15	77.800%	1.501	0.331	0.361	100.200	100.700	88.707%	89.549%
X		75.608%	2.317	0.357	0.332	99.850	100.900	86.945%	87.563%
σ		2.170%	0.916	0.031	0.025	0.341	0.178	2.022%	2.232%
%RSD		2.870	39.510	8.594	7.606	0.342	0.177	2.326	2.549
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:49:22	0.185	0.151	5.747	5.310	5.420	82.016%		
2	12:49:49	0.131	0.134	5.784	5.365	5.548	83.927%		
3	12:50:15	0.102	0.099	5.774	5.265	5.475	85.954%		
X		0.139	0.128	5.768	5.313	5.481	83.966%		
σ		0.042	0.027	0.019	0.050	0.064	1.970%		
%RSD		30.050	20.810	0.326	0.938	1.173	2.346		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:38	77.562%	0.001	50.600	48.040	0.000	41580.000	25880.000	25430.000
2	12:54:04	83.166%	-0.050	48.590	48.740	0.000	39720.000	24970.000	24830.000
3	12:54:31	83.556%	-0.037	53.500	46.570	0.000	40770.000	25940.000	25700.000
X		81.428%	-0.029	50.900	47.780	0.000	40690.000	25600.000	25320.000
σ		3.354%	0.027	2.473	1.109	0.000	934.200	543.500	448.600
%RSD		4.119	92.090	4.859	2.321	0.000	2.296	2.123	1.772
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:38	40.150	6081.000	0.000	8692.000	52860.000	54130.000	69.620%	3.987
2	12:54:04	39.580	5890.000	0.000	8562.000	52810.000	52520.000	75.635%	3.794
3	12:54:31	40.890	6080.000	0.000	8941.000	54780.000	54490.000	73.254%	4.168
X		40.210	6017.000	0.000	8732.000	53490.000	53720.000	72.836%	3.983
σ		0.655	110.100	0.000	192.700	1126.000	1052.000	3.030%	0.187
%RSD		1.630	1.830	0.000	2.207	2.105	1.959	4.159	4.691
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:38	5.712	8.236	4399.000	76.150	275.200	2.082	3.948	2.707
2	12:54:04	8.667	8.157	4330.000	71.060	260.700	1.771	4.329	2.620
3	12:54:31	7.514	8.508	4549.000	77.790	273.800	1.963	4.246	2.684
X		7.298	8.300	4426.000	75.000	269.900	1.939	4.174	2.670
σ		1.489	0.184	112.100	3.509	8.010	0.157	0.200	0.045
%RSD		20.410	2.214	2.533	4.679	2.968	8.087	4.794	1.688
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:38	2.433	10.280	10.320	5.406	-0.064	-0.488	0.000	323.300
2	12:54:04	2.355	10.850	10.510	1.908	-0.492	-1.107	0.000	327.100
3	12:54:31	2.580	10.690	10.910	12.160	-0.003	0.030	0.000	334.800
X		2.456	10.610	10.580	6.492	-0.187	-0.521	0.000	328.400
σ		0.114	0.292	0.299	5.213	0.266	0.569	0.000	5.854
%RSD		4.655	2.755	2.831	80.300	142.700	109.200	0.000	1.782
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:38	73.365%	7.715	7.884	71.075%	-0.040	-0.044	0.032	0.033
2	12:54:04	77.653%	7.981	8.133	73.691%	-0.048	-0.037	0.020	0.030
3	12:54:31	77.864%	8.120	8.079	74.879%	-0.051	-0.025	0.070	-2.306
X		76.294%	7.939	8.032	73.215%	-0.046	-0.035	0.041	-0.748
σ		2.539%	0.206	0.131	1.946%	0.005	0.010	0.026	1.349
%RSD		3.327	2.593	1.630	2.658	11.820	27.630	65.150	180.500
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:38	73.818%	-1.054	0.358	0.417	76.200	76.010	83.790%	85.007%
2	12:54:04	75.953%	-0.916	0.471	0.410	76.660	77.250	87.043%	88.178%
3	12:54:31	78.437%	-0.920	0.409	0.465	76.740	77.800	88.607%	89.600%
X		76.069%	-0.964	0.412	0.431	76.530	77.020	86.480%	87.595%
σ		2.312%	0.079	0.057	0.030	0.291	0.919	2.458%	2.351%
%RSD		3.039	8.184	13.750	6.938	0.380	1.194	2.842	2.684
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:53:38	0.045	0.031	0.344	0.320	0.321	83.854%		
2	12:54:04	0.044	0.031	0.365	0.341	0.350	85.409%		
3	12:54:31	0.035	0.039	0.324	0.373	0.334	86.180%		
X		0.041	0.034	0.345	0.344	0.335	85.148%		
σ		0.005	0.004	0.020	0.027	0.015	1.185%		
%RSD		12.340	13.310	5.919	7.718	4.337	1.391		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:57:52	82.268%	-0.007	14.450	13.840	0.000	9759.000	7321.000	7308.000
2	12:58:19	85.234%	-0.066	13.850	13.400	0.000	9894.000	7490.000	7426.000
3	12:58:46	88.782%	-0.055	14.410	14.640	0.000	9747.000	7427.000	7388.000
X		85.428%	-0.043	14.240	13.960	0.000	9800.000	7413.000	7374.000
σ		3.261%	0.032	0.339	0.630	0.000	81.780	85.300	60.410
%RSD		3.817	74.250	2.379	4.512	0.000	0.835	1.151	0.819
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:57:52	-0.072	1737.000	0.000	2029.000	21940.000	20530.000	71.305%	1.128
2	12:58:19	-0.295	1781.000	0.000	2011.000	22700.000	21400.000	73.819%	1.787
3	12:58:46	-0.191	1743.000	0.000	1978.000	22670.000	21240.000	75.275%	1.400
X		-0.186	1754.000	0.000	2006.000	22440.000	21060.000	73.466%	1.438
σ		0.111	24.040	0.000	25.490	427.800	465.800	2.008%	0.331
%RSD		59.860	1.371	0.000	1.271	1.907	2.212	2.734	23.010
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:57:52	12.720	9.810	1161.000	-20.250	75.630	1.973	2.687	3.099
2	12:58:19	6.319	9.565	1174.000	-19.990	66.600	2.001	3.111	3.406
3	12:58:46	18.150	10.020	1186.000	-20.960	71.170	1.974	2.861	3.413
X		12.400	9.797	1174.000	-20.400	71.130	1.983	2.886	3.306
σ		5.921	0.226	12.400	0.502	4.516	0.016	0.213	0.179
%RSD		47.770	2.306	1.056	2.459	6.349	0.788	7.377	5.419
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:57:52	3.251	11.170	11.390	4.363	-0.229	-0.635	0.000	81.840
2	12:58:19	3.300	11.440	12.100	0.424	-1.028	0.639	0.000	83.490
3	12:58:46	3.046	11.940	12.270	8.599	-1.100	1.197	0.000	84.820
X		3.199	11.520	11.920	4.462	-0.786	0.400	0.000	83.390
σ		0.135	0.390	0.464	4.088	0.483	0.939	0.000	1.495
%RSD		4.214	3.385	3.893	91.630	61.500	234.700	0.000	1.793
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:57:52	75.786%	1.915	2.006	74.733%	-0.047	-0.059	0.056	0.060
2	12:58:19	78.294%	2.118	2.162	75.289%	-0.065	-0.056	0.044	0.059
3	12:58:46	80.055%	2.239	2.139	76.702%	-0.044	-0.039	0.048	0.095
X		78.045%	2.091	2.102	75.575%	-0.052	-0.051	0.050	0.071
σ		2.145%	0.164	0.084	1.015%	0.011	0.011	0.006	0.021
%RSD		2.749	7.834	4.008	1.343	21.520	21.390	12.480	28.770
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:57:52	75.833%	-1.269	0.453	0.348	32.430	33.880	85.467%	85.750%
2	12:58:19	79.001%	-1.176	0.375	0.440	33.430	33.700	87.768%	88.629%
3	12:58:46	80.131%	-1.061	0.413	0.379	33.270	34.310	90.142%	91.327%
X		78.322%	-1.169	0.414	0.389	33.040	33.960	87.792%	88.569%
σ		2.228%	0.105	0.039	0.047	0.535	0.313	2.337%	2.789%
%RSD		2.845	8.943	9.502	11.980	1.620	0.922	2.663	3.149
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:57:52	0.037	0.023	0.203	0.171	0.173	86.681%		
2	12:58:19	0.024	0.021	0.186	0.177	0.176	87.797%		
3	12:58:46	0.034	0.033	0.195	0.170	0.179	88.386%		
X		0.032	0.026	0.195	0.172	0.176	87.621%		
σ		0.007	0.006	0.009	0.004	0.003	0.866%		
%RSD		22.280	24.500	4.373	2.188	1.741	0.988		



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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:08	84.464%	-0.010	14.100	12.110	0.000	118.500	6.607	6.063
2	13:02:34	85.327%	-0.011	12.520	12.110	0.000	117.100	6.342	6.293
3	13:03:01	88.324%	-0.015	13.130	12.630	0.000	111.800	7.874	6.878
X		86.038%	-0.012	13.250	12.280	0.000	115.800	6.941	6.412
		2.026%	0.003	0.799	0.302	0.000	3.528	0.819	0.420
		2.354	23.700	6.029	2.460	0.000	3.046	11.800	6.552
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:08	0.355	18.380	0.000	56.320	86.890	131.100	71.516%	1.882
2	13:02:34	0.818	21.100	0.000	63.550	114.500	131.100	73.820%	1.292
3	13:03:01	0.486	24.150	0.000	66.070	78.510	136.700	75.063%	1.135
X		0.553	21.210	0.000	61.980	93.310	133.000	73.466%	1.436
		0.239	2.884	0.000	5.061	18.850	3.213	1.800%	0.394
		43.130	13.600	0.000	8.164	20.200	2.417	2.450	27.400
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:08	16.500	11.090	0.514	-24.370	-14.630	-0.005	1.910	0.323
2	13:02:34	12.810	10.920	0.496	-24.200	-12.680	-0.020	1.982	0.296
3	13:03:01	12.020	11.290	0.481	-23.370	-15.660	-0.010	2.286	0.364
X		13.780	11.100	0.497	-23.980	-14.320	-0.012	2.059	0.328
		2.388	0.187	0.017	0.536	1.516	0.008	0.200	0.034
		17.330	1.683	3.417	2.237	10.590	65.950	9.707	10.410
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:08	0.236	3.173	3.319	4.074	-2.744	1.597	0.000	0.123
2	13:02:34	0.301	3.203	3.445	1.824	-1.026	-1.102	0.000	0.122
3	13:03:01	0.352	3.428	3.317	5.907	-0.797	-1.138	0.000	0.131
X		0.296	3.268	3.360	3.935	-1.522	-0.214	0.000	0.125
		0.058	0.140	0.074	2.045	1.064	1.568	0.000	0.005
		19.630	4.273	2.193	51.970	69.920	731.900	0.000	3.833
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:08	74.479%	0.120	0.152	74.903%	-0.070	-0.054	-0.001	-0.014
2	13:02:34	78.264%	0.195	0.155	77.449%	-0.066	-0.051	-0.002	0.026
3	13:03:01	79.849%	0.183	0.245	78.227%	-0.062	-0.053	-0.012	-0.030
X		77.531%	0.166	0.184	76.860%	-0.066	-0.052	-0.005	-0.006
		2.759%	0.040	0.053	1.739%	0.004	0.002	0.006	0.029
		3.558	24.260	28.580	2.262	6.301	3.051	120.200	461.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:08	75.266%	-1.425	-0.299	-0.301	0.034	0.092	85.041%	84.643%
2	13:02:34	78.073%	-1.400	-0.311	-0.320	0.048	0.092	87.267%	87.078%
3	13:03:01	80.106%	-1.371	-0.293	-0.334	0.069	0.106	88.543%	89.057%
X		77.815%	-1.399	-0.301	-0.318	0.051	0.097	86.951%	86.926%
		2.430%	0.027	0.009	0.016	0.017	0.008	1.772%	2.211%
		3.123	1.924	2.937	5.126	34.560	8.424	2.038	2.544
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:02:08	0.009	0.012	0.031	0.029	0.024	87.870%		
2	13:02:34	0.012	0.011	0.016	0.034	0.022	88.890%		
3	13:03:01	0.011	0.008	0.011	0.023	0.023	89.862%		
X		0.011	0.010	0.019	0.029	0.023	88.874%		
		0.002	0.002	0.011	0.005	0.001	0.996%		
		15.480	18.740	53.880	18.620	2.915	1.121		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:28	79.697%	0.669	4.100	4.449	0.000	126.300	70.240	69.790
2	13:14:55	84.153%	0.601	4.278	4.586	0.000	126.200	68.910	67.950
3	13:15:20	83.912%	0.699	3.610	4.279	0.000	129.200	69.870	68.220
X		82.587%	65.629%	79.921%	88.763%	0.000	159.013%	69.671%	68.651%
σ		2.506%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.034	7.619	8.650	3.464	0.000	1.358	0.986	1.451
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:28	15.960	337.200	0.000	87.140	99.100	89.350	72.267%	4.155
2	13:14:55	15.840	335.000	0.000	77.840	92.860	87.850	73.841%	3.887
3	13:15:20	15.830	329.900	0.000	79.770	98.990	89.190	75.823%	4.204
X		52.922%	66.803%	0.000	81.583%	96.984%	88.795%	73.977%	81.641%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.782%	n/a
%RSD		0.461	1.119	0.000	6.012	3.679	0.924	2.408	4.180
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:28	0.783	1.601	4.144	4.980	27.840	0.409	0.566	1.785
2	13:14:55	0.756	1.544	4.233	5.498	26.860	0.444	0.725	1.702
3	13:15:20	0.969	1.547	4.276	4.840	24.910	0.411	0.710	1.878
X		83.616%	78.195%	84.356%	10.212%	53.072%	84.251%	66.710%	89.411%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		13.870	2.036	1.587	6.788	5.624	4.605	13.150	4.917
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:28	1.669	5.050	4.858	0.989	3.935	2.054	0.000	4.424
2	13:14:55	1.930	4.651	4.871	0.580	2.042	3.883	0.000	4.476
3	13:15:20	1.939	4.788	5.012	1.224	3.196	5.024	0.000	4.560
X		92.316%	96.596%	98.272%	93.090%	61.151%	73.070%	0.000	89.733%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		8.310	4.192	1.740	34.960	31.210	41.000	0.000	1.527
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:28	71.136%	4.429	4.453	73.316%	0.802	0.878	1.012	-3.922
2	13:14:55	73.487%	4.471	4.615	75.279%	0.842	0.849	0.841	0.902
3	13:15:20	74.392%	4.892	4.651	76.302%	0.914	0.972	0.911	0.915
X		73.005%	91.945%	91.461%	74.966%	85.286%	89.978%	92.117%	-70.183%
σ		1.681%	n/a	n/a	1.517%	n/a	n/a	n/a	n/a
%RSD		2.302	5.577	2.303	2.024	6.641	7.172	9.310	397.400
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:14:28	74.449%	6.847	1.364	1.470	9.201	9.030	80.396%	81.095%
2	13:14:55	76.854%	2.656	1.454	1.381	9.274	8.840	83.404%	82.902%
3	13:15:20	77.303%	3.095	1.385	1.415	9.335	8.947	83.880%	84.398%
X		76.202%	83.989%	70.030%	71.080%	92.703%	89.390%	82.560%	82.799%
σ		1.535%	n/a	n/a	n/a	n/a	n/a	1.889%	1.654%
%RSD		2.014	54.860	3.357	3.159	0.722	1.067	2.288	1.998
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:14:28	1.026	0.952	1.059	0.918	0.971	84.896%		
2	13:14:55	1.016	0.951	1.083	0.971	1.026	86.479%		
3	13:15:20	0.973	0.979	1.071	0.949	1.034	87.885%		
X		100.478%	96.072%	107.119%	94.584%	101.035%	86.420%		
σ		n/a	n/a	n/a	n/a	n/a	1.496%		
%RSD		2.814	1.652	1.121	2.830	3.399	1.731		

CCV 1467888 1/30/2015 1:18:30 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:56	60.599%	94.330	95.180	95.760	0.000	47950.000	46340.000	46150.000
2	13:19:23	62.122%	93.710	95.680	95.160	0.000	48020.000	46620.000	46550.000
3	13:19:49	63.515%	95.250	103.300	96.070	0.000	47410.000	46560.000	46100.000
X		62.078%	94.431%	98.044%	95.662%	0.000	95.586%	93.018%	92.530%
σ		1.459%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.349	0.825	4.627	0.484	0.000	0.697	0.316	0.530
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:56	444.500	4925.000	0.000	48890.000	48140.000	48330.000	64.404%	99.760
2	13:19:23	451.800	4685.000	0.000	49770.000	49060.000	49620.000	66.197%	97.420
3	13:19:49	444.600	4634.000	0.000	48800.000	48850.000	49280.000	67.021%	100.200
X		89.393%	94.961%	0.000	98.303%	97.369%	98.152%	65.874%	99.130%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.338%	n/a
%RSD		0.929	3.270	0.000	1.091	0.990	1.365	2.031	1.511
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:56	91.540	93.160	476.900	24290.000	24520.000	94.210	93.330	94.950
2	13:19:23	93.350	94.350	486.100	24600.000	25000.000	94.340	94.870	95.810
3	13:19:49	95.100	95.750	489.600	24940.000	25290.000	95.130	95.880	97.080
X		93.330%	94.418%	96.840%	98.456%	99.758%	94.558%	94.693%	95.947%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.906	1.373	1.358	1.324	1.572	0.525	1.355	1.113
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:56	93.040	100.700	101.000	97.240	97.910	99.520	0.000	94.200
2	13:19:23	94.540	101.900	99.880	95.480	101.300	95.090	0.000	95.410
3	13:19:49	95.910	104.400	101.000	97.350	95.400	99.860	0.000	97.520
X		94.497%	102.344%	100.626%	96.690%	98.211%	98.157%	0.000	95.713%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.519	1.858	0.647	1.087	3.024	2.710	0.000	1.756
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:56	69.002%	92.840	92.460	70.065%	97.260	95.680	97.600	96.300
2	13:19:23	71.831%	96.710	97.230	70.531%	98.650	97.330	97.760	93.130
3	13:19:49	71.852%	100.900	100.600	70.747%	98.420	96.760	98.080	93.390
X		70.895%	96.829%	96.756%	70.448%	98.110%	96.589%	97.814%	94.272%
σ		1.640%	n/a	n/a	0.349%	n/a	n/a	n/a	n/a
%RSD		2.313	4.183	4.212	0.495	0.758	0.871	0.251	1.866
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:18:56	71.798%	92.510	95.600	96.120	93.400	94.840	78.673%	79.157%
2	13:19:23	72.695%	95.550	98.100	98.930	96.820	96.800	81.163%	81.282%
3	13:19:49	74.395%	96.100	98.140	98.720	95.460	96.220	82.395%	82.321%
X		72.962%	94.722%	97.280%	97.925%	95.226%	95.950%	80.744%	80.920%
σ		1.319%	n/a	n/a	n/a	n/a	n/a	1.896%	1.613%
%RSD		1.808	2.039	1.498	1.597	1.807	1.050	2.349	1.993
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:18:56	101.100	99.610	102.500	101.800	102.100	81.977%		
2	13:19:23	105.000	103.100	105.500	105.600	105.400	81.806%		
3	13:19:49	106.400	103.800	106.400	105.000	105.400	82.301%		
X		104.181%	102.182%	104.794%	104.150%	104.275%	82.028%		
σ		n/a	n/a	n/a	n/a	n/a	0.252%		
%RSD		2.658	2.205	1.908	1.951	1.824	0.307		

CCB3 1/30/2015 1:25:53 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:20	66.636%	0.038	1.244	0.966	0.000	83.140	7.156	6.397
2	13:26:47	71.159%	-0.021	0.642	0.924	0.000	80.390	6.779	6.870
3	13:27:13	69.966%	-0.003	0.954	1.095	0.000	77.240	5.209	7.292
X		69.254%	0.005	0.947	0.995	0.000	80.260	6.381	6.853
σ		2.344%	0.030	0.301	0.089	0.000	2.952	1.032	0.448
%RSD		3.385	637.300	31.840	8.991	0.000	3.678	16.180	6.534
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:20	-3.364	1.712	0.000	49.290	9.318	5.848	70.139%	-0.310
2	13:26:47	-3.598	-0.522	0.000	38.070	-4.552	10.170	72.677%	-0.318
3	13:27:13	-3.680	-0.481	0.000	44.810	2.541	9.274	74.063%	-0.285
X		-3.547	0.236	0.000	44.050	2.435	8.432	72.293%	-0.304
σ		0.164	1.278	0.000	5.647	6.936	2.283	1.990%	0.017
%RSD		4.629	541.500	0.000	12.820	284.800	27.070	2.753	5.671
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:20	0.132	-0.092	0.075	-29.800	-2.241	0.007	-0.279	0.077
2	13:26:47	0.001	-0.053	0.099	-30.830	-2.718	-0.000	-0.218	0.061
3	13:27:13	0.042	-0.048	0.072	-33.040	1.704	0.009	-0.290	-0.003
X		0.058	-0.064	0.082	-31.220	-1.085	0.005	-0.262	0.045
σ		0.067	0.024	0.015	1.656	2.427	0.005	0.038	0.042
%RSD		114.500	37.750	17.950	5.305	223.700	89.420	14.650	93.120
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:20	-0.013	0.039	0.034	0.041	-0.706	1.216	0.000	0.022
2	13:26:47	0.048	0.087	0.078	-0.220	0.134	0.763	0.000	0.026
3	13:27:13	0.065	0.086	0.176	0.250	0.640	1.340	0.000	0.047
X		0.033	0.071	0.096	0.024	0.023	1.106	0.000	0.032
σ		0.041	0.027	0.073	0.236	0.680	0.304	0.000	0.013
%RSD		124.300	38.720	75.600	985.700	2991.000	27.470	0.000	42.250
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:20	74.839%	0.195	0.180	77.048%	-0.055	-0.043	0.019	0.030
2	13:26:47	78.563%	0.164	0.199	79.436%	-0.055	-0.033	-0.002	0.103
3	13:27:13	78.005%	0.176	0.241	79.702%	-0.045	-0.041	0.032	0.051
X		77.136%	0.178	0.207	78.728%	-0.052	-0.039	0.016	0.062
σ		2.008%	0.016	0.032	1.462%	0.006	0.005	0.017	0.038
%RSD		2.604	8.750	15.300	1.856	11.000	13.640	105.700	61.120
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:26:20	78.038%	-1.872	-0.253	-0.244	-0.021	0.023	83.078%	83.315%
2	13:26:47	80.397%	-1.824	-0.290	-0.284	-0.017	0.015	85.067%	85.500%
3	13:27:13	81.304%	-1.820	-0.254	-0.278	-0.047	0.024	87.247%	85.863%
X		79.913%	-1.839	-0.265	-0.269	-0.028	0.021	85.131%	84.893%
σ		1.686%	0.029	0.021	0.021	0.016	0.005	2.085%	1.378%
%RSD		2.110	1.587	8.018	7.944	57.230	24.050	2.450	1.623
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:26:20	0.013	0.017	0.030	0.026	0.027	86.646%		
2	13:26:47	0.014	0.012	0.035	0.025	0.029	89.082%		
3	13:27:13	0.016	0.020	0.029	0.029	0.027	89.961%		
X		0.014	0.016	0.031	0.027	0.027	88.563%		
σ		0.001	0.004	0.003	0.002	0.001	1.717%		
%RSD		10.350	23.390	10.120	7.930	3.657	1.939		

180-40615-L-1-A @10 1/30/2015 1:30:11 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:37	68.077%	-0.033	23.960	20.980	0.000	81290.000	104.800	104.200
2	13:31:04	72.514%	-0.055	18.520	19.710	0.000	80740.000	104.300	103.900
3	13:31:30	75.482%	-0.028	21.790	21.160	0.000	80960.000	109.400	109.400
X		72.024%	-0.039	21.430	20.620	0.000	81000.000	106.200	105.800
σ		3.727%	0.015	2.741	0.789	0.000	274.900	2.803	3.108
%RSD		5.174	37.630	12.790	3.825	0.000	0.339	2.640	2.937
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:37	46.050	54070.000	0.000	291.300	658.300	993.700	72.649%	6.669
2	13:31:04	47.750	54960.000	0.000	290.800	692.600	988.800	75.915%	7.019
3	13:31:30	46.150	56070.000	0.000	281.700	685.900	1011.000	78.128%	7.153
X		46.650	55030.000	0.000	287.900	678.900	998.000	75.564%	6.947
σ		0.954	999.000	0.000	5.436	18.150	11.930	2.757%	0.250
%RSD		2.044	1.815	0.000	1.888	2.674	1.196	3.648	3.602
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:37	1.525	0.320	8.909	102.700	104.600	0.136	0.569	2.147
2	13:31:04	0.914	0.425	9.015	102.000	102.800	0.125	0.732	2.166
3	13:31:30	0.886	0.393	8.971	104.800	99.470	0.118	0.782	2.180
X		1.108	0.380	8.965	103.200	102.300	0.126	0.695	2.164
σ		0.361	0.054	0.053	1.415	2.590	0.009	0.111	0.016
%RSD		32.570	14.120	0.594	1.371	2.532	7.154	16.030	0.761
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:37	2.221	2.735	2.717	9.140	-1.243	-0.128	0.000	2.868
2	13:31:04	2.367	2.693	2.773	9.643	-0.825	1.276	0.000	2.914
3	13:31:30	2.344	2.848	2.905	9.985	-0.792	0.603	0.000	2.985
X		2.311	2.759	2.798	9.589	-0.953	0.584	0.000	2.922
σ		0.079	0.080	0.097	0.425	0.251	0.702	0.000	0.059
%RSD		3.401	2.904	3.464	4.433	26.370	120.300	0.000	2.021
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:37	76.380%	1.433	1.389	75.838%	-0.055	-0.020	0.060	0.075
2	13:31:04	79.887%	1.510	1.465	77.597%	-0.035	-0.020	0.082	0.037
3	13:31:30	81.746%	1.581	1.477	79.883%	-0.059	-0.038	0.055	0.062
X		79.338%	1.508	1.444	77.772%	-0.050	-0.026	0.066	0.058
σ		2.725%	0.074	0.047	2.028%	0.013	0.010	0.014	0.019
%RSD		3.435	4.904	3.285	2.608	25.310	39.710	21.830	33.060
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:37	78.267%	-1.829	2.518	2.563	1.558	1.755	86.188%	86.362%
2	13:31:04	81.649%	-1.813	2.717	2.616	1.796	1.592	90.634%	90.239%
3	13:31:30	84.290%	-1.800	2.675	2.622	1.610	1.632	92.374%	92.700%
X		81.402%	-1.814	2.637	2.601	1.655	1.660	89.732%	89.767%
σ		3.019%	0.014	0.105	0.033	0.125	0.085	3.190%	3.195%
%RSD		3.709	0.791	3.986	1.259	7.564	5.121	3.555	3.559
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:30:37	0.011	0.010	10.250	9.411	9.702	91.991%		
2	13:31:04	0.008	0.010	10.520	9.854	9.948	93.281%		
3	13:31:30	0.016	0.013	10.600	9.828	10.050	94.676%		
X		0.011	0.011	10.450	9.698	9.902	93.316%		
σ		0.004	0.002	0.183	0.249	0.181	1.343%		
%RSD		34.570	17.190	1.746	2.565	1.824	1.439		

180-40615-L-2-A @10 1/30/2015 1:34:26 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	13:34:52	74.915%	-0.088	15.440	14.170	0.000	81230.000	63.500	59.040	
2	13:35:18	77.317%	-0.120	16.520	14.490	0.000	80440.000	62.980	61.280	
3	13:35:45	79.766%	-0.077	14.690	14.510	0.000	79260.000	61.270	58.740	
X		77.333%	-0.095	15.550	14.390	0.000	80310.000	62.580	59.690	
		$\sigma$	2.426%	0.022	0.919	0.192	0.000	991.900	1.164	1.389
		%RSD	3.137	23.330	5.914	1.333	0.000	1.235	1.860	2.326
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	13:34:52	36.900	43040.000	0.000	246.100	323.400	608.500	77.849%	6.033	
2	13:35:18	38.280	43940.000	0.000	249.400	324.400	633.300	81.249%	6.226	
3	13:35:45	36.280	43570.000	0.000	225.800	318.600	611.700	84.299%	5.534	
X		37.150	43520.000	0.000	240.500	322.100	617.800	81.132%	5.931	
		$\sigma$	1.022	451.600	0.000	12.790	3.118	13.490	3.227%	0.357
		%RSD	2.752	1.038	0.000	5.317	0.968	2.183	3.977	6.020
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	13:34:52	1.017	0.397	15.890	102.800	98.480	0.093	0.781	2.290	
2	13:35:18	1.183	0.301	16.020	103.100	99.060	0.111	0.684	2.259	
3	13:35:45	1.984	0.378	15.750	101.500	90.240	0.110	0.637	2.295	
X		1.395	0.358	15.890	102.500	95.930	0.104	0.701	2.281	
		$\sigma$	0.517	0.051	0.136	0.824	4.931	0.010	0.074	0.019
		%RSD	37.050	14.210	0.854	0.804	5.140	9.726	10.520	0.854
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	13:34:52	2.069	1.850	1.778	5.445	-0.900	-0.178	0.000	1.257	
2	13:35:18	2.139	2.188	2.083	4.959	0.516	0.968	0.000	1.300	
3	13:35:45	1.926	1.872	1.882	5.445	-0.587	1.727	0.000	1.288	
X		2.045	1.970	1.914	5.283	-0.324	0.839	0.000	1.282	
		$\sigma$	0.109	0.189	0.155	0.281	0.744	0.959	0.000	0.022
		%RSD	5.322	9.581	8.092	5.310	229.700	114.300	0.000	1.739
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	13:34:52	81.478%	1.358	1.463	80.791%	-0.056	-0.037	0.041	0.013	
2	13:35:18	84.735%	1.575	1.435	82.649%	-0.046	-0.043	0.049	0.072	
3	13:35:45	87.265%	1.476	1.606	84.221%	-0.063	-0.051	0.025	-0.008	
X		84.492%	1.470	1.501	82.554%	-0.055	-0.044	0.038	0.026	
		$\sigma$	2.901%	0.109	0.092	1.717%	0.009	0.007	0.012	0.041
		%RSD	3.433	7.405	6.112	2.080	15.660	15.220	32.560	160.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho	
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
1	13:34:52	83.754%	-1.899	1.627	1.622	1.545	1.661	90.095%	90.915%	
2	13:35:18	85.821%	-1.863	1.691	1.658	1.694	1.671	94.000%	94.653%	
3	13:35:45	88.446%	-1.885	1.674	1.659	1.410	1.709	95.300%	96.153%	
X		86.007%	-1.882	1.664	1.647	1.550	1.680	93.132%	93.907%	
		$\sigma$	2.351%	0.018	0.033	0.021	0.142	0.025	2.709%	2.698%
		%RSD	2.734	0.970	1.995	1.284	9.150	1.495	2.909	2.873
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi			
		ppb	ppb	ppb	ppb	ppb	ppb			
1	13:34:52	0.008	0.006	6.676	6.245	6.317	93.172%			
2	13:35:18	0.007	0.008	6.906	6.242	6.490	94.973%			
3	13:35:45	0.007	0.008	7.036	6.487	6.532	96.173%			
X		0.008	0.007	6.873	6.325	6.446	94.773%			
		$\sigma$	0.001	0.001	0.183	0.140	0.114	1.510%		
		%RSD	12.040	12.710	2.657	2.220	1.767	1.594		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:07	79.047%	-0.047	21.580	21.080	0.000	72700.000	105.800	101.700
2	13:39:34	82.584%	-0.051	20.890	20.870	0.000	71300.000	103.400	100.400
3	13:40:00	86.211%	-0.094	20.900	19.820	0.000	70430.000	101.300	99.930
X		82.614%	-0.064	21.120	20.590	0.000	71480.000	103.500	100.700
σ		3.582%	0.026	0.394	0.673	0.000	1150.000	2.244	0.940
%RSD		4.336	40.890	1.866	3.267	0.000	1.609	2.168	0.934
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:07	49.650	62400.000	0.000	299.100	645.900	1043.000	84.416%	6.444
2	13:39:34	49.960	63280.000	0.000	292.700	698.600	1047.000	87.403%	7.611
3	13:40:00	49.010	62770.000	0.000	291.900	617.900	1045.000	89.498%	6.559
X		49.540	62820.000	0.000	294.600	654.100	1045.000	87.105%	6.871
σ		0.488	442.100	0.000	3.931	40.960	2.456	2.554%	0.643
%RSD		0.985	0.704	0.000	1.334	6.261	0.235	2.932	9.360
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:07	0.983	0.285	3.753	68.320	61.930	0.043	0.387	1.766
2	13:39:34	1.175	0.300	3.932	69.330	63.010	0.049	0.226	1.636
3	13:40:00	0.149	0.260	3.763	68.990	60.040	0.039	0.310	1.858
X		0.769	0.282	3.816	68.880	61.660	0.044	0.308	1.754
σ		0.545	0.020	0.100	0.512	1.504	0.005	0.081	0.112
%RSD		70.900	7.180	2.624	0.744	2.439	11.240	26.250	6.362
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:07	1.714	1.868	1.852	11.480	0.557	1.517	0.000	3.139
2	13:39:34	1.665	1.932	1.904	11.380	0.172	-0.300	0.000	3.225
3	13:40:00	1.529	1.690	1.924	11.370	-0.203	1.808	0.000	3.140
X		1.636	1.830	1.893	11.410	0.176	1.009	0.000	3.168
σ		0.096	0.125	0.037	0.061	0.380	1.142	0.000	0.050
%RSD		5.860	6.836	1.966	0.534	216.200	113.300	0.000	1.563
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:07	86.546%	1.083	1.028	86.239%	-0.064	-0.031	0.024	0.080
2	13:39:34	90.979%	1.186	1.103	88.081%	-0.067	-0.039	0.050	0.066
3	13:40:00	92.778%	1.137	1.105	89.357%	-0.034	-0.046	0.027	0.039
X		90.101%	1.135	1.078	87.892%	-0.055	-0.039	0.034	0.062
σ		3.208%	0.051	0.044	1.567%	0.018	0.007	0.014	0.021
%RSD		3.560	4.507	4.075	1.783	32.980	19.150	41.630	34.470
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:07	88.399%	-1.928	3.344	3.380	1.374	1.398	95.990%	95.642%
2	13:39:34	90.950%	-1.907	3.520	3.714	1.370	1.467	98.638%	99.218%
3	13:40:00	93.126%	-1.883	3.546	3.579	1.465	1.404	99.742%	100.203%
X		90.825%	-1.906	3.470	3.558	1.403	1.423	98.124%	98.354%
σ		2.366%	0.023	0.110	0.168	0.054	0.038	1.928%	2.400%
%RSD		2.605	1.196	3.168	4.719	3.820	2.679	1.965	2.440
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:39:07	0.014	0.008	11.130	10.690	10.760	97.106%		
2	13:39:34	0.004	0.010	11.640	10.640	11.020	98.832%		
3	13:40:00	0.012	0.011	11.520	10.650	10.970	100.037%		
X		0.010	0.010	11.430	10.660	10.910	98.658%		
σ		0.005	0.002	0.265	0.028	0.139	1.473%		
%RSD		53.020	19.070	2.319	0.267	1.272	1.493		

180-40615-L-4-A @50 1/30/2015 1:42:58 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:25	80.771%	-0.035	5.754	6.000	0.000	37000.000	13.860	13.830
2	13:43:51	82.194%	-0.037	7.219	6.327	0.000	37320.000	13.580	13.720
3	13:44:18	83.550%	-0.079	5.037	6.401	0.000	36850.000	14.780	14.430
X		82.172%	-0.050	6.004	6.243	0.000	37060.000	14.070	13.990
σ		1.390%	0.025	1.112	0.214	0.000	242.000	0.626	0.384
%RSD		1.691	50.450	18.530	3.420	0.000	0.653	4.448	2.744
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:25	8.717	34640.000	0.000	65.460	94.870	334.700	84.078%	3.135
2	13:43:51	8.747	35030.000	0.000	56.080	111.600	339.200	86.874%	3.451
3	13:44:18	8.435	35450.000	0.000	60.500	115.600	336.400	88.286%	3.497
X		8.633	35040.000	0.000	60.680	107.400	336.800	86.412%	3.361
σ		0.172	406.000	0.000	4.692	11.010	2.258	2.141%	0.197
%RSD		1.995	1.159	0.000	7.732	10.250	0.670	2.478	5.860
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:25	0.302	0.067	0.343	-2.555	-5.834	0.015	0.217	0.552
2	13:43:51	0.317	0.060	0.363	-3.728	-6.181	0.013	0.250	0.681
3	13:44:18	0.295	0.119	0.390	-3.934	-11.050	0.008	0.286	0.653
X		0.305	0.082	0.365	-3.406	-7.688	0.012	0.251	0.629
σ		0.011	0.032	0.023	0.744	2.915	0.004	0.035	0.068
%RSD		3.719	39.290	6.428	21.840	37.920	30.330	13.810	10.840
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:25	0.446	3.399	3.827	0.826	-0.998	0.842	0.000	0.676
2	13:43:51	0.506	3.490	3.389	0.513	0.768	0.753	0.000	0.692
3	13:44:18	0.551	3.590	3.556	0.694	0.015	0.190	0.000	0.658
X		0.501	3.493	3.591	0.678	-0.072	0.595	0.000	0.675
σ		0.053	0.096	0.221	0.157	0.886	0.354	0.000	0.017
%RSD		10.510	2.739	6.155	23.190	1236.000	59.410	0.000	2.471
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:25	86.376%	0.510	0.524	86.091%	-0.065	-0.048	0.034	-0.014
2	13:43:51	91.028%	0.483	0.556	88.147%	-0.059	-0.037	0.050	0.002
3	13:44:18	91.112%	0.456	0.487	89.067%	-0.059	-0.048	0.031	-0.013
X		89.505%	0.483	0.522	87.768%	-0.061	-0.045	0.038	-0.008
σ		2.710%	0.027	0.035	1.524%	0.003	0.006	0.010	0.009
%RSD		3.028	5.576	6.654	1.736	5.705	13.920	26.910	110.900
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:43:25	87.991%	-1.956	0.361	0.347	0.256	0.285	93.553%	94.616%
2	13:43:51	90.339%	-1.957	0.373	0.342	0.334	0.340	97.093%	97.418%
3	13:44:18	93.583%	-1.936	0.407	0.419	0.306	0.377	96.920%	98.577%
X		90.638%	-1.950	0.380	0.369	0.299	0.334	95.855%	96.870%
σ		2.808%	0.012	0.024	0.043	0.039	0.047	1.996%	2.036%
%RSD		3.098	0.596	6.318	11.600	13.220	13.920	2.082	2.102
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:43:25	0.011	0.009	5.024	4.768	4.848	95.592%		
2	13:43:51	0.004	0.006	5.363	4.851	4.965	96.398%		
3	13:44:18	0.007	0.008	5.286	5.018	5.027	98.093%		
X		0.008	0.008	5.224	4.879	4.947	96.694%		
σ		0.004	0.001	0.178	0.128	0.091	1.276%		
%RSD		47.520	17.320	3.405	2.617	1.833	1.320		



CCV 1467888 1/30/2015 1:50:21 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:48	74.278%	93.300	98.180	97.440	0.000	47810.000	46210.000	46030.000
2	13:51:14	73.791%	100.100	102.400	97.920	0.000	48310.000	46820.000	46700.000
3	13:51:40	76.149%	96.400	100.500	95.420	0.000	47510.000	46090.000	46080.000
X		74.739%	96.589%	100.339%	96.926%	0.000	95.755%	92.746%	92.543%
σ		1.244%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.665	3.505	2.089	1.370	0.000	0.850	0.842	0.799
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:48	439.800	4750.000	0.000	46740.000	45900.000	46380.000	87.625%	93.000
2	13:51:14	448.100	4851.000	0.000	47640.000	47090.000	47490.000	88.508%	92.130
3	13:51:40	442.600	4846.000	0.000	47490.000	46940.000	47330.000	88.118%	93.330
X		88.700%	96.316%	0.000	94.583%	93.286%	94.138%	88.084%	92.818%
σ		n/a	n/a	0.000	n/a	n/a	n/a	0.442%	n/a
%RSD		0.958	1.184	0.000	1.012	1.386	1.277	0.502	0.671
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:48	88.410	88.080	463.000	23210.000	23690.000	90.040	90.330	90.310
2	13:51:14	89.110	89.440	471.200	23470.000	24270.000	90.820	90.960	92.190
3	13:51:40	90.270	90.360	472.600	23760.000	24500.000	91.280	91.910	91.280
X		89.264%	89.297%	93.786%	93.925%	96.619%	90.714%	91.068%	91.261%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.049	1.283	1.102	1.178	1.740	0.688	0.871	1.029
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:48	90.910	96.190	96.940	93.180	97.320	98.490	0.000	95.810
2	13:51:14	90.930	99.250	96.620	94.470	98.860	95.290	0.000	96.250
3	13:51:40	92.840	96.820	98.240	94.130	97.580	98.700	0.000	96.660
X		91.561%	97.420%	97.267%	93.924%	97.924%	97.493%	0.000	96.242%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.214	1.655	0.882	0.712	0.841	1.959	0.000	0.440
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:48	87.500%	92.670	93.080	84.767%	96.670	95.620	96.890	96.390
2	13:51:14	89.062%	97.600	99.020	84.515%	97.410	96.720	99.330	97.670
3	13:51:40	89.440%	98.470	99.670	84.501%	96.930	96.670	98.720	98.030
X		88.667%	96.247%	97.253%	84.594%	97.004%	96.336%	98.313%	97.364%
σ		1.028%	n/a	n/a	0.150%	n/a	n/a	n/a	n/a
%RSD		1.160	3.248	3.735	0.177	0.387	0.649	1.291	0.889
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:50:48	87.624%	93.310	95.080	96.000	93.850	95.710	93.680%	93.395%
2	13:51:14	88.997%	94.870	96.380	96.630	95.230	95.350	95.486%	95.688%
3	13:51:40	89.120%	94.900	96.780	98.180	95.930	97.020	94.588%	94.956%
X		88.580%	94.358%	96.081%	96.935%	95.005%	96.030%	94.585%	94.680%
σ		0.831%	n/a	n/a	n/a	n/a	n/a	0.903%	1.171%
%RSD		0.938	0.960	0.924	1.157	1.113	0.915	0.954	1.237
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:50:48	100.400	99.520	101.600	100.500	100.500	93.669%		
2	13:51:14	103.000	100.700	102.200	102.300	101.800	93.667%		
3	13:51:40	103.700	102.100	103.900	104.100	103.700	92.311%		
X		102.347%	100.753%	102.534%	102.302%	101.982%	93.216%		
σ		n/a	n/a	n/a	n/a	n/a	0.784%		
%RSD		1.679	1.256	1.183	1.737	1.585	0.841		

CCB4 1/30/2015 1:57:45 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:12	79.055%	-0.062	0.932	0.678	0.000	165.700	4.884	5.989
2	13:58:38	83.128%	-0.038	0.358	0.437	0.000	164.500	4.653	5.965
3	13:59:05	83.401%	-0.038	0.926	0.597	0.000	158.400	7.005	5.787
X		81.861%	-0.046	0.738	0.571	0.000	162.900	5.514	5.913
σ		2.434%	0.014	0.330	0.123	0.000	3.934	1.297	0.111
%RSD		2.973	29.980	44.680	21.520	0.000	2.415	23.520	1.869
Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:12	-4.883	39.700	0.000	48.760	9.518	6.352	85.780%	-0.349
2	13:58:38	-4.799	43.810	0.000	39.600	9.796	4.410	90.144%	-0.222
3	13:59:05	-4.903	55.220	0.000	38.830	16.580	2.918	92.199%	-0.346
X		-4.862	46.240	0.000	42.400	11.970	4.560	89.374%	-0.306
σ		0.055	8.044	0.000	5.524	4.001	1.722	3.278%	0.073
%RSD		1.128	17.390	0.000	13.030	33.440	37.760	3.667	23.730
Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:12	-0.072	-0.024	0.044	-14.830	-3.637	0.005	-0.358	0.014
2	13:58:38	-0.091	0.025	0.042	-15.380	-13.320	-0.002	-0.329	0.035
3	13:59:05	0.114	-0.032	0.057	-17.470	-12.960	-0.008	-0.365	0.021
X		-0.016	-0.010	0.048	-15.890	-9.974	-0.001	-0.351	0.023
σ		0.113	0.031	0.008	1.395	5.491	0.006	0.019	0.011
%RSD		689.000	295.800	16.300	8.774	55.050	429.100	5.399	46.270
Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:12	-0.012	0.035	0.127	-0.035	0.553	0.966	0.000	0.030
2	13:58:38	-0.035	0.122	0.116	0.297	0.556	1.146	0.000	0.023
3	13:59:05	-0.002	0.085	0.088	0.309	-0.258	1.681	0.000	0.025
X		-0.016	0.081	0.110	0.191	0.284	1.264	0.000	0.026
σ		0.017	0.044	0.020	0.195	0.469	0.372	0.000	0.004
%RSD		104.100	53.810	18.220	102.400	165.400	29.410	0.000	14.060
Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:12	89.129%	0.125	0.201	91.708%	-0.052	-0.046	0.023	0.051
2	13:58:38	92.850%	0.220	0.219	92.943%	-0.050	-0.042	0.022	0.018
3	13:59:05	95.054%	0.170	0.166	95.139%	-0.056	-0.049	0.009	0.013
X		92.344%	0.172	0.195	93.263%	-0.053	-0.045	0.018	0.027
σ		2.994%	0.047	0.027	1.738%	0.003	0.003	0.008	0.021
%RSD		3.243	27.440	13.710	1.864	5.716	7.575	44.720	74.920
Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:12	92.059%	-1.842	-0.230	-0.269	-0.024	0.026	94.755%	94.141%
2	13:58:38	94.565%	-1.803	-0.236	-0.259	-0.030	0.019	96.662%	97.248%
3	13:59:05	97.869%	-1.842	-0.266	-0.268	-0.051	0.015	99.352%	99.510%
X		94.831%	-1.829	-0.244	-0.265	-0.035	0.020	96.923%	96.966%
σ		2.914%	0.022	0.020	0.006	0.014	0.005	2.310%	2.695%
%RSD		3.073	1.227	8.001	2.166	41.210	27.080	2.383	2.780
Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:58:12	0.011	0.012	0.023	0.013	0.026	95.840%		
2	13:58:38	0.014	0.017	0.028	0.017	0.026	96.824%		
3	13:59:05	0.021	0.011	0.030	0.028	0.027	99.681%		
X		0.015	0.013	0.027	0.019	0.026	97.448%		
σ		0.005	0.003	0.004	0.007	0.001	1.995%		
%RSD		32.260	23.980	13.890	37.360	3.449	2.047		

## Performance Report

### Sample details

Sample name : ITUNE

Acquired at : 1/30/2015 9:22:05 AM

Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

### Mass Calibration verification

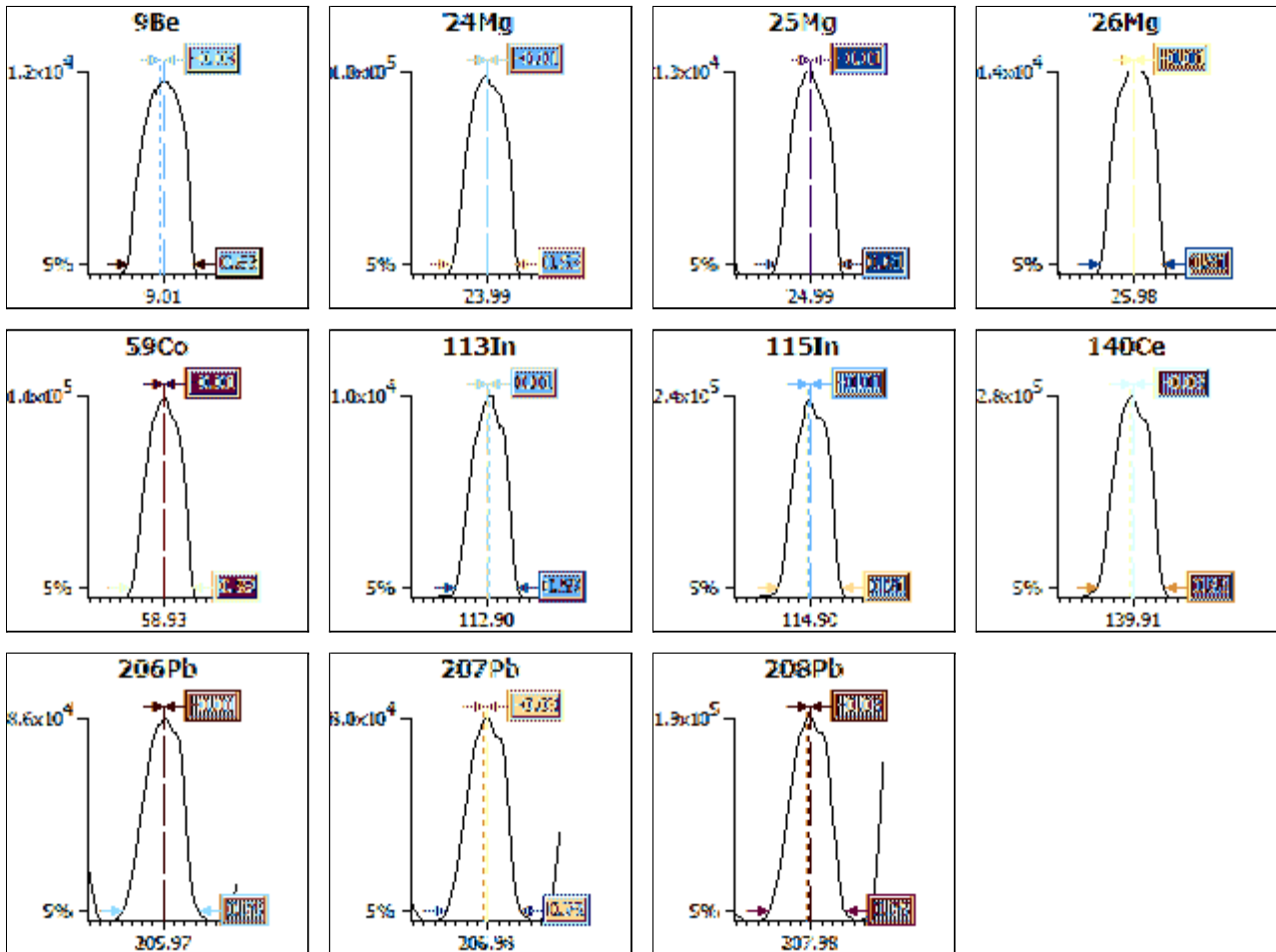
#### Acquisition parameters

Sweeps : 50

Dwell : 1.0 mSecs

Point spacing : 0.02 amu

Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
<b><sup>9</sup>Be</b>	0.90	0.40	0.10	0.63	-0.03
<b><sup>24</sup>Mg</b>	0.90	0.40	0.10	0.63	-0.01
<b><sup>25</sup>Mg</b>	0.90	0.40	0.10	0.61	-0.01
<b><sup>26</sup>Mg</b>	0.90	0.40	0.10	0.61	-0.01
<b><sup>59</sup>Co</b>	0.90	0.40	0.10	0.59	-0.01
<b><sup>113</sup>In</b>	0.90	0.40	0.10	0.59	0.01
<b><sup>115</sup>In</b>	0.90	0.40	0.10	0.61	-0.01
<b><sup>140</sup>Ce</b>	0.90	0.40	0.10	0.65	-0.03
<b><sup>206</sup>Pb</b>	0.90	0.40	0.10	0.75	-0.01
<b><sup>207</sup>Pb</b>	0.90	0.40	0.10	0.73	-0.03
<b><sup>208</sup>Pb</b>	0.90	0.40	0.10	0.75	-0.03

**Sample details**

Sample name : ITUNE

Acquired at : 1/30/2015 9:22:05 AM

Report name : EPA ILM05.2 / 6020A 2.1 [8/10/2014 1:06:06 PM]

**Tune conditions**

Major		Minor		Global		Add. Gases	
Extraction	-180	Lens 2	-43.9	Standard resolution	n/a	CCT1	0.00
Lens 1	4.7	Lens 3	-171.8	High resolution	n/a	CCT2	0.00
Focus	22.9	Forward power	1404	Analogue Detector	n/a		
D1	-29.8	Horizontal	32	PC Detector	n/a		
Pole Bias	-0.0	Vertical	404				
Hexapole Bias	-3.4	D2	-121				
Nebuliser	0.82	DA	-80.0				
Sampling Depth	100	Cool	14.0				
		Auxiliary	0.80				

**Sensitivity and stability results****Acquisition parameters**

Sweeps : 180

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	59Co	113In	115In
<b>Dwell (mSecs)</b>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Limits</b>	<b>%RSD</b>	-	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	<b>Countrate</b>	-	>100	>500	>150	>150	>500	>500	>10000
1	9:22:52 AM	0	11204	105723	13657	15993	117881	10796	248937
2	9:24:04 AM	0	11008	107851	14305	16491	120118	10726	252298
3	9:25:16 AM	0	11219	111531	14698	17242	120584	10838	252449
4	9:26:28 AM	0	11234	113553	15099	17503	120683	10891	252180
5	9:27:40 AM	0	11071	112296	14668	17340	120388	10762	251554
x		0	11147	110191	14485	16914	119931	10803	251484
σ		0.10	101.42	3277.61	541.75	644.87	1165.98	64.14	1463.47
%RSD		31.180	0.910	2.974	3.740	3.813	0.972	0.594	0.582

Run	Time	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
<b>Dwell (mSecs)</b>		0.0	0.0	0.0	0.0	0.0	0.0
<b>Limits</b>	<b>%RSD</b>	5.0%	-	5.0%	5.0%	5.0%	-
	<b>Countrate</b>	>10000	-	>1000	>1000	>5000	-
1	9:22:52 AM	289109	4931	90062	83852	192668	0
2	9:24:04 AM	292863	4977	90577	84400	194610	0
3	9:25:16 AM	294216	4941	90837	84586	194901	0
4	9:26:28 AM	294001	4990	91013	84081	195111	0
5	9:27:40 AM	292753	4910	90556	84186	194099	0
x		292588	4950	90609	84221	194278	0
σ		2052.46	32.80	360.00	283.92	976.82	0.13
%RSD		0.701	0.663	0.397	0.337	0.503	100.347

**Ratio results**

Run	Time	156Ce O/140Ce	
<b>Ratio limits</b>			<0.0600
1	9:22:52 AM	0	
2	9:24:04 AM	0	
3	9:25:16 AM	0	
4	9:26:28 AM	0	
5	9:27:40 AM	0	
x		0.0169	
σ		0.00	
%RSD		0.7447	

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Batch Number: 131708 Batch Start Date: 01/26/15 11:05 Batch Analyst: Rosenbaum, Ron

Batch Method: 3005A Batch End Date: 01/26/15 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAPITTCPMS 00018	MTAPITTMISA 00023	MTAPITTMISC 00029	
MB 180-131708/1		3005A, 6020A		50 mL	50 mL				
LCS 180-131708/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-40617-B-1	HD-CW-9-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40617-B-2	HD-CW-13-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40617-B-3	HD-CW-15A-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40617-B-4	HD-CW-17-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-40617-B-5	HD-CW-20-0/1-0	3005A, 6020A	T	50 mL	50 mL				

Batch Notes	
Batch Comment	Metals B6
Lot # of hydrochloric acid	2.5ml 1452455
Lot # of Nitric Acid	1ml 1459659
Hot Block ID number	HB3
Oven, Bath or Block Temperature 1	95C
Pipette ID	L1201611U
Person who witnessed spiking	RJR
ID number of the thermometer	IP2-14 0.0 C5
Digestion Tube/Cup Lot #	ENV.EXPRESS 1406020

Basis	Basis Description
T	Total/NA

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

# **GENERAL CHEMISTRY**

COVER PAGE  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-40617-1

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

Project: Harley Davidson

Client Sample ID	Lab Sample ID
<u>HD-CW-9-0/1-0</u>	<u>180-40617-1</u>
<u>HD-CW-13-0/1-0</u>	<u>180-40617-2</u>
<u>HD-CW-15A-0/1-0</u>	<u>180-40617-3</u>
<u>HD-CW-17-0/1-0</u>	<u>180-40617-4</u>
<u>HD-CW-20-0/1-0</u>	<u>180-40617-5</u>

Comments:

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: HD-CW-9-0/1-0

Lab Sample ID: 180-40617-1

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:25

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	260	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	260	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B



1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: HD-CW-13-0/1-0

Lab Sample ID: 180-40617-2

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:37

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	300	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	300	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: HD-CW-15A-0/1-0

Lab Sample ID: 180-40617-3

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 08:10

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	160	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	160	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: HD-CW-17-0/1-0

Lab Sample ID: 180-40617-4

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:43

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	250	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	250	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN  
 INORGANIC ANALYSIS DATA SHEET  
 GENERAL CHEMISTRY

Client Sample ID: HD-CW-20-0/1-0

Lab Sample ID: 180-40617-5

Lab Name: TestAmerica Pittsburgh

Job No.: 180-40617-1

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

Matrix: Water

Date Sampled: 01/20/2015 07:30

Reporting Basis: WET

Date Received: 01/21/2015 10:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	200	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	200	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

2-IN  
 CALIBRATION QUALITY CONTROL  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1  
 SDG No.: \_\_\_\_\_  
 Analyst: CLL Batch Start Date: 01/27/2015  
 Reporting Units: mg/L Analytical Batch No.: 131782

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	05:37	Total Alkalinity as CaCO3 to pH 4.5	135	125	108	80-120		WALK125PPMCCV_00080
14	CCB	05:37	Total Alkalinity as CaCO3 to pH 4.5	3.96				J	
			Bicarbonate Alkalinity as CaCO3	3.96				J	
			Carbonate Alkalinity as CaCO3	5.0				U	
24	CCV	05:37	Total Alkalinity as CaCO3 to pH 4.5	133	125	106	80-120		WALK125PPMCCV_00080
25	CCB	05:37	Total Alkalinity as CaCO3 to pH 4.5	3.96				J	
			Bicarbonate Alkalinity as CaCO3	3.96				J	
			Carbonate Alkalinity as CaCO3	5.0				U	

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.: 180-40617-1

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

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 131782 Date: 01/27/2015 05:37							
SM 2320B	MB 180-131782/2	Total Alkalinity as CaCO3 to pH 4.5	3.96	J	mg/L	5.0	1
SM 2320B	MB 180-131782/2	Bicarbonate Alkalinity as CaCO3	3.96	J	mg/L	5.0	1
SM 2320B	MB 180-131782/2	Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	1

7A-IN  
 LAB CONTROL SAMPLE  
 GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 131782		Date: 01/27/2015 05:37									
						LCS Source: WALK250PPMPi_00089					
SM	LCS	Total Alkalinity as	269		mg/L	250	108	80-120			
2320B	180-131782/1	CaCO3 to pH 4.5									

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: 180-40617-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: NOEQUIP  
Method: SM 2320B MDL Date: 01/27/2011 15:49

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bicarbonate Alkalinity as CaCO <sub>3</sub>		5	0.4111
Carbonate Alkalinity as CaCO <sub>3</sub>		5	0.4111
Total Alkalinity as CaCO <sub>3</sub> to pH 4.5		5	0.4111



9-IN  
CALIBRATION BLANK DETECTION LIMITS  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-40617-1  
SDG Number: \_\_\_\_\_  
Matrix: Water Instrument ID: NOEQUIP  
Method: SM 2320B XMDL Date: 01/27/2011 15:49

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bicarbonate Alkalinity as CaCO3		5	0.4111
Carbonate Alkalinity as CaCO3		5	0.4111
Total Alkalinity as CaCO3 to pH 4.5		5	0.4111

13-IN  
ANALYSIS RUN LOG  
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Instrument ID: NOEQUIP Analysis Method: SM 2320B

Start Date: 01/27/2015 05:37 End Date: 01/27/2015 05:37

Lab Sample Id	D/F	Type	Time	Analytes																											
				Alk	ALK	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	Ar	
LCS 180-131782/1	1	T	05:37	X																											
MB 180-131782/2	1	T	05:37	X	X	X																									
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
CCV 180-131782/13	1		05:37	X																											
CCB 180-131782/14	1		05:37	X	X	X																									
180-40617-1	1	T	05:37	X	X	X																									
180-40617-2	1	T	05:37	X	X	X																									
180-40617-3	1	T	05:37	X	X	X																									
180-40617-4	1	T	05:37	X	X	X																									
180-40617-5	1	T	05:37	X	X	X																									
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
ZZZZZZ			05:37																												
CCV 180-131782/24	1		05:37	X																											
CCB 180-131782/25	1		05:37	X	X	X																									

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

*L6#012715ALK*

Analyst: *Chahyde*  
 Reviewed By: *Seedra*  
 pH Meter ID: *Accum XL SW #94102132*  
 pH 4 Start: *4.03*

Date: *1-27-15*  
 Date: *cut 27-15*  
 AD Batch: *131782*  
 pH 4 End: *4.05*

Job Number(s): *40599-40617-40708-40463*

**Calculations:**

$$\text{Alkalinity as CaCO}_3 \text{ mg/L} = \frac{(\text{mL of H}_2\text{SO}_4) (N)(50,000)}{\text{mL of Sample}}$$

**Alkalinity Relationships:**

P = Phenolphthalein Alkalinity (pH 8.3)

T = Total Alkalinity

OH<sup>-</sup> = Hydroxide Alkalinity as CaCO<sub>3</sub>

CO<sub>3</sub><sup>2-</sup> = Carbonate Alkalinity as CaCO<sub>3</sub>

HCO<sub>3</sub><sup>-</sup> = Bicarbonate Concentration as CaCO<sub>3</sub>

Results	OH <sup>-</sup>	CO <sub>3</sub> <sup>2-</sup>	HCO <sub>3</sub> <sup>-</sup>	Results	OH <sup>-</sup>	CO <sub>3</sub> <sup>2-</sup>	HCO <sub>3</sub> <sup>-</sup>
P = 0	0	0	T	P = 1/2T	0	2P	0
P < 1/2T	0	2P	T-2P	P > 1/2T	2P-T	2(T-P)	0
				P = T	T	0	0

*[Handwritten Signature]*

Sample ID	pH	Sample Volume	mL to pH 8.3	Ttl mL pH 4.5	N	T	P	OH <sup>-</sup>	CO <sub>3</sub> <sup>2-</sup>	HCO <sub>3</sub>
LCS	10.98	50	6.7	13.6	0.0198	269.28				
MB	5.56		0	0.2		3.96				
180-40463-6	8.39		0.2	9.6		190.08				
180-40599-2	6.78		0	4.5		89.1				
-3	7.55		0	6.2		122.76				
4	6.83		0	16.7		330.66				
5	6.67		0	14.8		293.04				
6	6.57		0	12.6		249.48				
<del>6.7</del>	<del>5.52</del>		<del>0</del>	<del>0.1</del>		<del>0.01-27-15</del>				
8	6.95		0	16.2		320.76				
9	7.77		0	8.2		162.36				
9X	7.80		0	8.4		166.32				
CU	10.89		3.5	6.8		134.64				
CB	5.69		0	0.2		3.96				
180-40607-1	7.34		0	12.9		255.42				
2	7.07		0	15.4		304.92				
3	7.37		0	8.3		164.34				
4	7.13		0	12.5		247.5				
5	7.56		0	10.0		198				
180-40708-1	7.93		0	5.3		104.94				
2	9.32		3.3	30.8		609.84				
3	9.11		0.8	6.1		120.78				
3X	9.15		0.9	6.3		124.74				
CU	10.81		3.5	6.7		132.66				
CB	5.49		0	0.2		3.96				



6390 Joyce Drive Phone 303-940-0033  
# 100 Fax 866-283-0269  
Golden, CO 80403 www.phenova.com

**Data Reporting Sheet - Water Pollution Proficiency Testing Study**

**Study ID: WP0115**

**Opening Date: January 12, 2015 - Closing Date: February 26, 2015**

Laboratory: TestAmerica - Pittsburgh  
301 Alpha Dr.  
RIDC Park  
Pittsburgh, PA 15238  
UNITED STATES

Contact: Virginia Zisman  
412-963-7058  
EPA Lab ID: PA00164

Tin and Titanium (PT-SNTI-WP)							Lot #: 8152-38
NELAC Code	Analyte	</>	Result	NELAC / Agency Method Code	Method Description	Analysis Date	Analyst (Optional)
1175	Tin		µg/L				
1180	Titanium		µg/L				
Chromium VI (PT-CR6-WP)							Lot #: 8152-06
NELAC Code	Analyte	</>	Result	NELAC / Agency Method Code	Method Description	Analysis Date	Analyst (Optional)
1045	Chromium VI		µg/L				
Demand (PT-DEM-WP)							Lot #: 8152-07
NELAC Code	Analyte	</>	Result	NELAC / Agency Method Code	Method Description	Analysis Date	Analyst (Optional)
1530	BOD		mg/L				
1555	CBOD		mg/L				
1565	CCD		mg/L				
2040	TOC		mg/L				
Minerals 1 (PT-MIN1-WP)							Lot #: 8152-08
NELAC Code	Analyte	</>	Result	NELAC / Agency Method Code	Method Description	Analysis Date	Analyst (Optional)
1505	Total Alkalinity(as CaCO3)		190	2320B	AUGAW 174	1-27-15	CZ
1540	Bromide		mg/L				
1575	Chloride		mg/L				
1730	Fluoride		mg/L				
2000	Sulfate		mg/L				
<b>Additional State Specific Analytes</b>							
1813	Total Inorganic Carbon		mg/L				

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-40617-1

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

Batch Number: 131782 Batch Start Date: 01/27/15 05:37 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	Initial pH	BuretStart1	BuretStop1	TitrantVolume1	BuretStart2
LCS 180-131782/1		SM 2320B		50 mL	10.98 SU	0 mL	6.7 mL	6.7 mL	0 mL
MB 180-131782/2		SM 2320B		50 mL	5.56 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-131782/13		SM 2320B		50 mL	10.89 SU	0 mL	3.5 mL	3.5 mL	0 mL
CCB 180-131782/14		SM 2320B		50 mL	5.69 SU	0 mL	0 mL	0 mL	0 mL
180-40617-A-1	HD-CW-9-0/1-0	SM 2320B	T	50 mL	7.34 SU	0 mL	0 mL	0 mL	0 mL
180-40617-A-2	HD-CW-13-0/1-0	SM 2320B	T	50 mL	7.07 SU	0 mL	0 mL	0 mL	0 mL
180-40617-A-3	HD-CW-15A-0/1-0	SM 2320B	T	50 mL	7.37 SU	0 mL	0 mL	0 mL	0 mL
180-40617-A-4	HD-CW-17-0/1-0	SM 2320B	T	50 mL	7.13 SU	0 mL	0 mL	0 mL	0 mL
180-40617-A-5	HD-CW-20-0/1-0	SM 2320B	T	50 mL	7.56 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-131782/24		SM 2320B		50 mL	10.81 SU	0 mL	3.5 mL	3.5 mL	0 mL
CCB 180-131782/25		SM 2320B		50 mL	5.49 SU	0 mL	0 mL	0 mL	0 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStop2	TitrantVolume2	CalcMsg	carb	hydr	bCarb
LCS 180-131782/1		SM 2320B		6.9 mL	6.9 mL	Case 2	265.32 mg/L	0 mg/L	3.9599999999999999 8 mg/L
MB 180-131782/2		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 mg/L
CCV 180-131782/13		SM 2320B		3.3 mL	3.3 mL	Case 4	130.68 mg/L	3.9600000000000000 1 mg/L	0 mg/L
CCB 180-131782/14		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 mg/L
180-40617-A-1	HD-CW-9-0/1-0	SM 2320B	T	12.9 mL	12.9 mL	Case 1	0 mg/L	0 mg/L	255.42 mg/L
180-40617-A-2	HD-CW-13-0/1-0	SM 2320B	T	15.4 mL	15.4 mL	Case 1	0 mg/L	0 mg/L	304.92 mg/L
180-40617-A-3	HD-CW-15A-0/1-0	SM 2320B	T	8.3 mL	8.3 mL	Case 1	0 mg/L	0 mg/L	164.34 mg/L
180-40617-A-4	HD-CW-17-0/1-0	SM 2320B	T	12.5 mL	12.5 mL	Case 1	0 mg/L	0 mg/L	247.5 mg/L
180-40617-A-5	HD-CW-20-0/1-0	SM 2320B	T	10.0 mL	10 mL	Case 1	0 mg/L	0 mg/L	198 mg/L
CCV 180-131782/24		SM 2320B		3.2 mL	3.2 mL	Case 4	126.72 mg/L	5.94 mg/L	0 mg/L
CCB 180-131782/25		SM 2320B		0.2 mL	0.2 mL	Case 1	0 mg/L	0 mg/L	3.96 mg/L

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.: 180-40617-1

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

Batch Number: 131782 Batch Start Date: 01/27/15 05:37 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00080	WALK250PPMPi 00089	
LCS 180-131782/1		SM 2320B		132.66 mg/L	269.28 mg/L	50 mL		50 mL	
MB 180-131782/2		SM 2320B		0 mg/L	3.96 mg/L	50 mL			
CCV 180-131782/13		SM 2320B		69.3 mg/L	134.64 mg/L	50 mL	50 mL		
CCB 180-131782/14		SM 2320B		0 mg/L	3.96 mg/L	50 mL			
180-40617-A-1	HD-CW-9-0/1-0	SM 2320B	T	0 mg/L	255.42 mg/L	50 mL			
180-40617-A-2	HD-CW-13-0/1-0	SM 2320B	T	0 mg/L	304.92 mg/L	50 mL			
180-40617-A-3	HD-CW-15A-0/1-0	SM 2320B	T	0 mg/L	164.34 mg/L	50 mL			
180-40617-A-4	HD-CW-17-0/1-0	SM 2320B	T	0 mg/L	247.5 mg/L	50 mL			
180-40617-A-5	HD-CW-20-0/1-0	SM 2320B	T	0 mg/L	198 mg/L	50 mL			
CCV 180-131782/24		SM 2320B		69.3 mg/L	132.66 mg/L	50 mL	50 mL		
CCB 180-131782/25		SM 2320B		0 mg/L	3.96 mg/L	50 mL			

Batch Notes	
Batch Comment	PH 4 START: 4.03 PH 4 END: 4.05
pH Buffer 1 ID	1179927
pH Buffer 2 ID	1282792
pH Buffer 3 ID	1393069
pH Buffer 4 ID	1233635
pH Buffer 5 ID	1179928
Sulfuric Acid Lot Number	1443293
Sulfuric Acid Vendor	RICCA
Nominal Amount Used	50 mL
Normality of first Titrant	.0198 N

Basis	Basis Description
T	Total/NA

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

# Shipping and Receiving Documents



Chain of Custody Record

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

Alkalinity (Carb/Bicarb), SO<sub>4</sub>, CL, NO<sub>3</sub>

VOCS (8260)

Total Na, Ca, K, and Mg (SW846 6020A)

Date Submitted: 11/20/15

Carrier: FEDEX

COE No. 774255 of 2005

Job No. 10042.16.004



180-40617 Chain of Custody

Sample Identification

Sample ID	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Sample Specific Notes
HD-CW-9-0/1-0	11/20/15	0735	Groundwater	W	5	
HD-CW-13-0/1-0		0737			5	
HD-CW-15A-0/1-0		0810			5	
HD-CW-17-0/1-0		0743			5	
HD-CW-20-0/1-0		0730	↓		5	
HD-QC6-0/1-0	✓	0900	Tap Blank	W	3	

Possible Hazard Identification  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

Special Instructions/OC Requirements & Comments: CLP Like Deliverables

Relinquished by (Print and Sign): Emily Wade

Relinquished by: TIA

Relinquished by:

Company: Leidas

Company: TIA

Company:

Date/Time: 11/20/15 0945

Date/Time: 12/01/15 1530

Date/Time:

Received by: [Signature]

Received by: Debrae Watkins

Received by:

Company: TIA

Company: TIA

Company:

Date/Time: 11/20/15 1232

Date/Time: 1-21-15 10:10

Date/Time:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Months

180-40617 Waybill



ORIGIN ID: KPDA (610) 337-9992  
SAMPLE RECEIPT  
TEST AMERICA  
1008 WEST 9TH AVE  
KING OF PRUSSIA, PA 19406  
UNITED STATES US

01/21/08  
0884  
A

17:00  
1

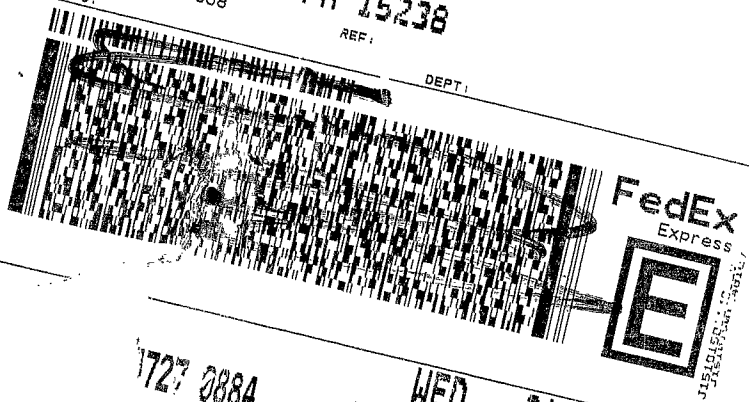
RT 1719  
197

A. CAL  
BILL R.

TO  
SAMPLE RECEIPT  
TEST AMERICA - PITTSBURGH  
301 ALPHA DR

PITTSBURGH PA 15238  
REF: (412) 963-7058  
INV: PO:

DEPT:



1727 0884

WED - 21 JAN AA  
STANDARD OVERNIGHT

GOA

15238  
PIT

King of Prussia  
Uncorrected temp  
Thermometer ID

4.3°C  
4.36

CF 0 Initials DW

PT-WI-SR-001 effective 7/26/13

## Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-40617-1

**Login Number: 40617**  
**List Number: 1**  
**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

Question	Answer	Comment
Radioactivity wasn't checked or is <= 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.	False	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	